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ABSTRACT

This handbook is designed to help students in Texas prepare for Future Farmers of America (FFA) poultry judgings. The handbook is organized into five major sections that cover the following topics: organization of the Texas FFA poultry judging contest; judging production hens; judging production pullets; grading ready-to-cook broilers, fryers, or roasters and turkeys; and egg grading (interior and shells). The sections on judging include information sheets on judging standards, exercises for self-testing, and photos and illustrations of various procedures used in the judgings. Sample grading cards conclude the document. (KC)

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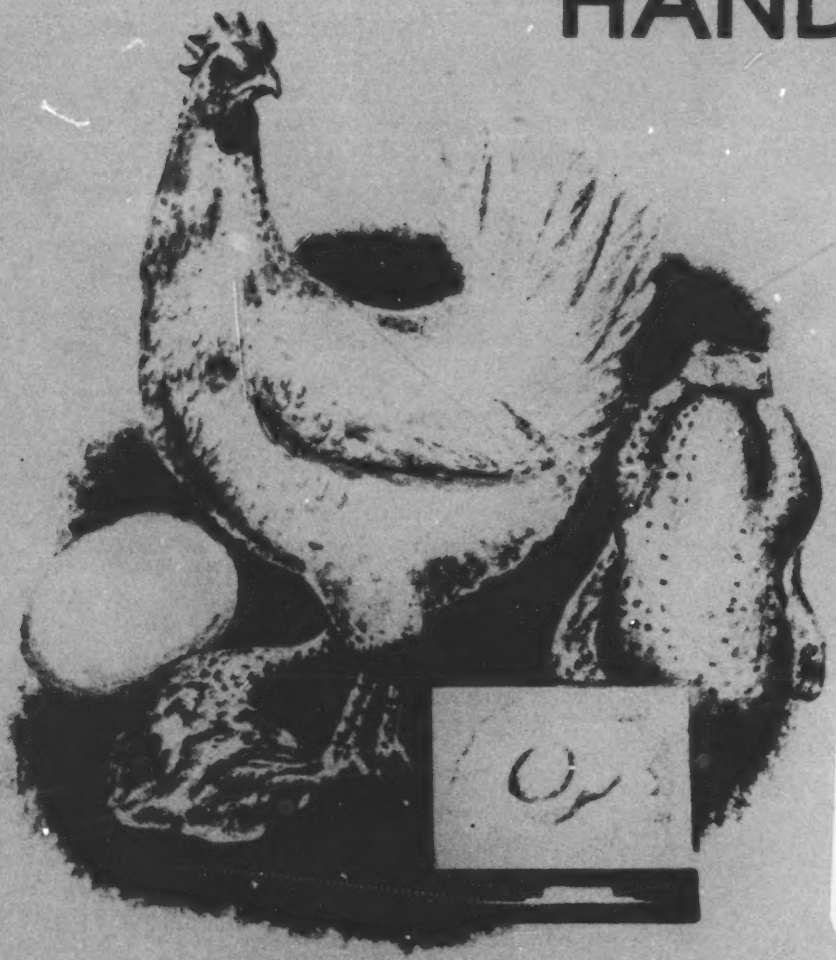
TEXAS FUTURE FARMERS OF AMERICA

POULTRY JUDGING HANDBOOK



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References:

American Standard of Perfection, Revised Edition, The American Poultry Association, Inc., 1026 East Oak Street, Cushing, Oklahoma 74023.

"Egg Grading Manual," Agriculture Handbook No. 75, Revised Edition, Poultry Division, Consumer and Marketing Service, U.S.D.A., Washington, D.C. 20250.

"Poultry Grading Manual," Agriculture Handbook No. 31, Revised Edition, Poultry Division, Consumer and Marketing Service, U.S.D.A., Washington, D.C. 20250.

"Poultry Judging and Poultry and Egg Grading," V.A. II Student Materials (Catalog #8083), Vocational Instructional Services, F.E. Box 182, College Station, Texas 77843.

Teaching Aids for Training Teams:

Color charts illustrating U.S. Standards and Grades for Eggs are available from Poultry Division, Consumer and Marketing Service, U.S.D.A., Washington, D.C. 20250.

Official egg air-cell gauges are available from the Contest Department, National FFA Center, P.O. Box 15160, Alexandria, Virginia 22309.

State contest placing and grading cards (Forms 2, 9, 10-A, 10-B, and 10-C) may be purchased from Collegiate FFA Chapter, Department of Agricultural Education, Texas A&M University, College Station, Texas 77843.

The Hormel Computing Slide for Scoring Judging Contests (Catalog #9002) may be purchased from Vocational Instructional Services, F.E. Box 182, College Station, Texas 77843.

The following slide sets may be purchased from Vocational Instructional Services, F.E. Box 182, College Station, Texas 77843.

Interior Quality of Eggs: Albumen & Yolk (Catalog #5010)
Judging Poultry (Catalog #5036)
Types of Egg Shell Conditions (Catalog #5056)
Proper Handling of Birds (Catalog #5064)

TEXAS FUTURE FARMERS OF AMERICA

POULTRY JUDGING HANDBOOK

Information Contained in this Publication
Conforms to the Rules and Regulations
of the National FFA Poultry Judging Contest
and was Prepared in Cooperation with the

Department of Poultry Science
Texas A&M University
College Station, Texas 77843
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Revised June, 1983

ORGANIZATION OF THE STATE FFA
POULTRY JUDGING CONTEST

IMPORTANT NOTICE

National FFA Contests, Kansas City, Missouri, Bulletin No. 4, 1982/1983/1984, secured from National FFA Center, Alexandria, Virginia 22309 should be studied.

State Judging Contest, 1982-1983-1984; Texas Association of Future Farmers of America, secured from Department of Agricultural Education, Texas A&M University, College Station, Texas 77843 should be studied.

The State contest, with few exceptions, will follow the National contest rules.

1. Eligible teams will assemble at 7:30 a.m. on the last Saturday in April at the Poultry Center, Texas A&M University. Judging will begin promptly at 8:00 a.m. Teams not present at this time will not be permitted to participate in the contest. A team shall consist of only three (3) members.

2. Classes 1 and 2 will be production classes of hens. Each class will consist of four (4) production hens of the same breed. Hens will be selected from Single-Comb White Leghorns or commercial strains (inbred crosses of Leghorn types). Birds may or may not be debeaked, decombed, or have one clipped wing.

   Contestants will be permitted to handle the hens. Leg bands will be used to identify individual birds. Use judging contest placing card Form 2.

3. Class 3 will be a production class of pullets. The class will consist of four (4) pullets (18 to 22 weeks of age and of the same breed) to be judged on the basis of potential productive capacity as layers. Pullets will be selected from Single-Comb White Leghorns or commercial strains (inbred crosses of Leghorn types). Birds may or may not be debeaked, decombed, or have one clipped wing.

   Contestants will be permitted to handle the pullets. Leg bands will be used to identify individual birds. Use judging contest placing card Form 2.

4. Class 4 will be a class of ten (10) ready-to-cook broilers, fryers, or roasters hung from shackles. Each carcass will weigh from $1\frac{1}{2}$ to 6 pounds and is to be graded according to U.S.D.A. Quality Grades A, B, and C. Pinfeathers and filoplumes (hair) will not be considered in grading.

   Contestants <u>are not</u> to handle the carcasses. Shackles may be turned by contestants to show the entire carcass of each bird. Use judging contest grading card Form 9.

5. Class 5 will be a class of five (5) ready-to-cook turkey hens and/or toms hung from shackles. Each carcass will weigh from 8 to 14 pounds and is to be graded according to U.S.D.A. Quality Grades A, B, and C. Pinfeathers and filoplumes (hair) will not be considered in grading.

Contestants are not to handle the carcasses. Shackles may be turned by contestants to show the entire carcass of each bird. Use judging contest grading card Form 9.

6. Class 6 will be a class of twenty (20) white or white-tint shell market eggs to be graded for interior quality only. U.S.D.A. Quality Grades will be AA, A, B, and Loss.

   Eggs in this class may be handled for candling purposes. Use judging contest grading card Form 10-A.

7. Class 7 will be a class of twenty (20) white or white-tint shell market eggs to be graded as broken-out for market quality. U.S.D.A. Quality Grades will be A, B, and Loss.

   Eggs in this class are not to be handled. Six-inch petri dishes with covers will be used to hold the broken-out eggs, to keep out foreign material, and to maintain egg quality over a longer period of time. Use judging contest grading card Form 10-B.

8. Class 8 will be a class of twenty (20) white or white-tint shell market eggs to be graded for exterior quality only. U.S.D.A. Quality Grades will be A, B, and Dirty.

   Eggs in this class are not to be handled. Eggs will be laid out horizontally and decisions are to be based on visible portion only. Use judging contest grading card Form 10-C.

9. Generally, 14 minutes will be allowed contestants for placing or grading each class. A time signal warning will be given at the end of 14 minutes for each class.

10. Points may be deducted from a contestant's total score if he or she handles birds or eggs incorrectly.

11. Oral or written reasons will not be given at the State contest.

12. Scoring Systems

    a. Class 1 - four (4) live birds. Perfect individual score is 50 points. The Hormel Scoring Card system will be used to determine contestants' scores.

    b. Class 2 - four (4) live birds. Perfect individual score is 50 points. The Hormel Scoring Card system will be used to determine contestants' scores.

    c. Class 3 - four (4) live birds. Perfect individual score is 50 points. The Hormel Scoring Card system will be used to determine contestants' scores.

    d. Class 4 - ten (10) ready-to-cook poultry. Perfect individual score is 40 points. A deduction of two points will be made for each space a bird is placed away from the correct quality with a maximum deduction of four points per bird.

e. Class 5 - five (5) ready-to-cook poultry. Perfect individual score is 40 points. Deductions are the same as for Class 4.

f. Class 6 - twenty (20) individual shell eggs - interior quality. Perfect individual score is 100 points. Deduct one point for each space an egg is placed away from the proper quality of edible egg. Deduct three points for crossing the Loss line. Deduct a maximum of five points per egg.

g. Class 7 - twenty (20) individual broken-out eggs. Perfect individual score is 100 points. Deductions are the same as for Class 6.

h. Class 8 - twenty (20) individual shell eggs - exterior quality. Perfect individual score is 100 points. Deduct one point for each space an egg is placed away from the proper quality. Deduct a maximum of three points for crossing the Dirty line. Deduct a maximum of five points per egg.

13. The perfect individual score for the total contest is 530 points. The perfect team score for the total contest is 1590 points.

14. In case ties occur for team awards, they shall be broken as follows: The team (1) with the high point individual wins, or if still tied, (2) the team with the highest score in placing the two production classes of hens will win, or if still tied, (3) the team with the highest score in placing the class of production pullets will win, or if still tied, (4) the team with the best score on grading interior quality of 20 eggs will win, or if still tied, (5) the coaches shall match for the high award.

Ties for individual awards shall be broken by beginning with step (2) of the process used for breaking team ties and substituting the word "individual" wherever the word "team" appears.

NOTES:

JUDGING PRODUCTION HENS

Both present and past production are considered when evaluating birds in the production hen classes. Thus, the birds selected for production hen classes will usually have characteristics indicating both present and past production.

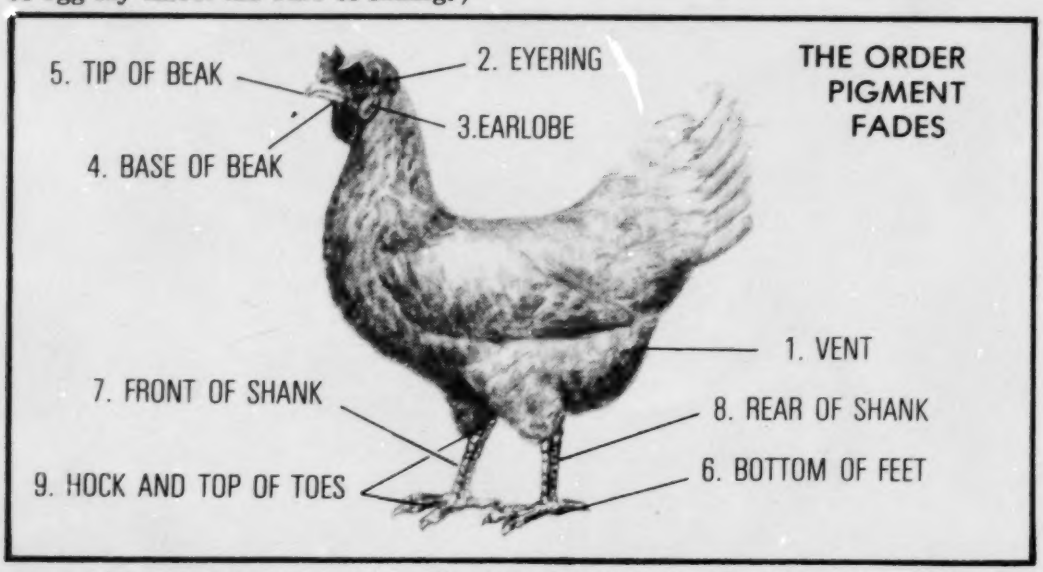
The purpose of judging production hen classes is to obtain a high level of competence in selecting high egg producing birds. Therefore, emphasis is placed on the number of eggs laid by the birds.

Judging and placing of production hens shall be governed by the following factors:

1. Pigmentation

Pigmentation is the coloration with or deposition of pigment in a cell or tissue. The Leghorns or inbred crosses of Leghorn types used in the poultry judging contest exhibit yellow pigmentation in the skin and other parts of the body. In addition, the color of the yellow pigment may be exhibited in varying degrees of intensity.

Since the yellow pigment fades (bleaches) from the body parts of birds as they lay eggs, the order and rate the pigment fades is an important factor in judging and placing a class of production hens. (Although fading of pigment is a reasonably good indicator of egg production, it is not entirely accurate. Factors such as body size, health of bird, feed composition, and amount of pigment at start of egg lay affect the rate of fading.)



When pullets begin to lay, the yellow pigment fades in the following order: vent, 0 to 5 eggs; eyering, 4 to 8 eggs; earlobe (Leghorns only), 8 to 15 eggs; beak, (from base to tip), 25 to 45 eggs; and shanks and feet, 150 to 250 eggs. Pigment fades in the shanks and feet in the following order: bottom of feet, front of shanks, rear of shanks, and hocks and top of toes.

The number of weeks and number of eggs required to fade the different body parts are as follows:

RATE PIGMENTATION FADES

Body Parts	Weeks to Fade (Approximate)	Eggs Laid (Average)
Vent	1	2
Eyering	1-2	4
Earlobes (Leghorns only)	2-3	8
Beak, 1/3 bleached	3-4	12
Beak, 2/3 bleached	4-6	25
Beak, entire	6-10	35
Bottom of feet	12-30	70
Front of shanks	25-30	100
Rear of shanks	30-40	140
Hocks and Top of Toes	40-50	180

Pigment returns to the body parts in the same order in which it fades; however, only about one-third of the time is required for the pigment to return as it took for it to fade. Four factors affecting the speed pigment returns to the body parts are: amount of pigment in feed, health and vitality of bird, whether hens are confined or allowed to range, and size and coarseness of hen.

Pigmentation is the most important factor in placing the classes of production hens. Therefore, to effectively judge hens, one must be able to accurately "read" pigment.

2. Handling Qualities and Abdominal Capacity

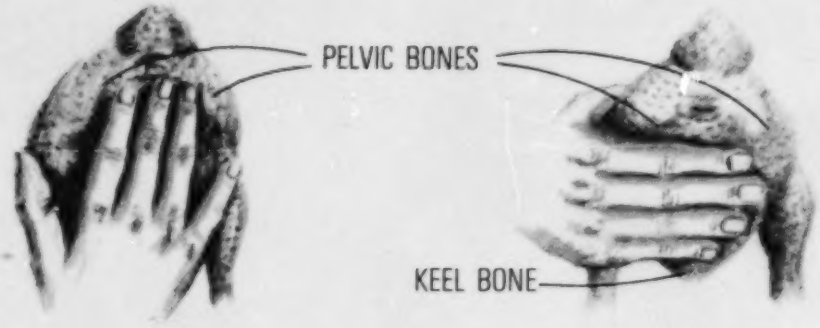
Handling qualities refer to the general condition of the abdomen. It is a good indicator of whether the bird is or is not presently laying eggs. Characteristics of a producing hen with desirable handling qualities are: thin and pliable skin, thin and flexible pelvic bones, and a soft abdomen free of fat.

Abdominal capacity of a hen is usually measured and expressed by finger's width, such as 1 by 2, 3 by 4, and so forth. A 3 by 4 measurement means the hen is three fingers wide between the pelvic bones and four fingers wide between the pelvic bones and the keel bone.

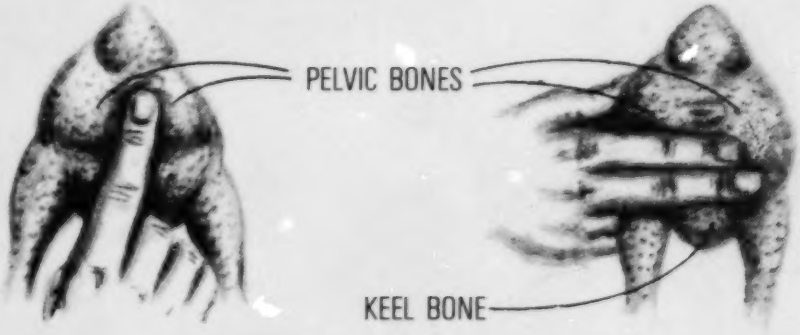
The abdomen of a layer is wide, soft, and expanded. In contrast, the abdomen of a non-layer will be narrow, hard, contracted, and thick boned.

Handling qualities and abdominal capacity should be evaluated in placing a class of hens or a close pair of hens in the class only if the hens cannot be placed on the pigmentation factor.

MEASURING ABDOMINAL CAPACITY
(Feathers Removed for Illustration Purposes)



3 BY 4 FINGER WIDTH (LAYER)



1 BY 2 FINGER WIDTH (NON-LAYER)

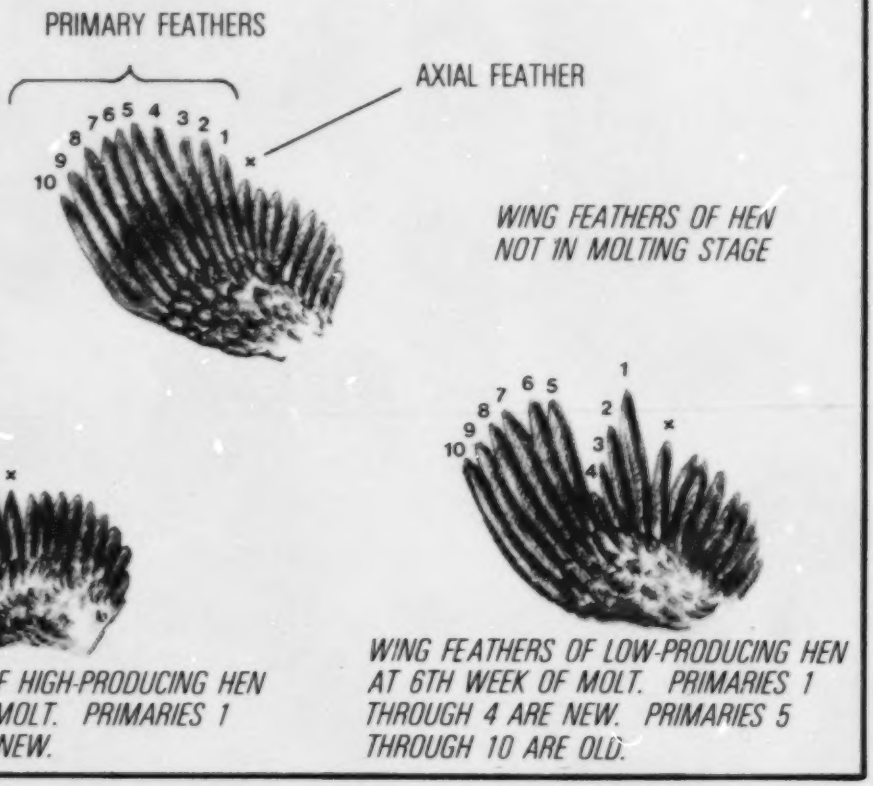
3. Plumage Condition and Molt

Two factors are considered in appraising the plumage (feathers) of hens. First is the overall condition of the plumage. The feathers of a high producer will be frayed, ragged, dirty, and dull. The plumage of a low producer will be smooth, show no wear, and exhibit a shiny appearance. In other words, the layer is busy laying eggs while the non-layer is busy caring for her feathers.

The second factor in appraising plumage is the rate of molt (shedding of feathers). High producers usually molt late in the fall and winter and spend a minimum amount of time molting. Low producers will have a molting period lasting up to 18 weeks in length. Hens usually discontinue egg laying during the molting period.

The order feathers are dropped during molt is: head, neck, body, primaries, main tail, and secondaries. In judging production hens, the rate of molt is determined by observing the primaries. The primary feathers are dropped from the axial feather outward in order from number one to number ten. Fast molters drop three to four feathers at a time; slow molters drop one feather at a time.

PRIMARIES IN DIFFERENT STAGES OF GROWTH


PRIMARY FEATHERS
AXIAL FEATHER
WING FEATHERS OF HEN NOT IN MOLTING STAGE
WING FEATHERS OF HIGH-PRODUCING HEN AT 6TH WEEK OF MOLT. PRIMARIES 1 THROUGH 10 ARE NEW.
WING FEATHERS OF LOW-PRODUCING HEN AT 6TH WEEK OF MOLT. PRIMARIES 1 THROUGH 4 ARE NEW. PRIMARIES 5 THROUGH 10 ARE OLD.

Plumage condition and molt should be evaluated in placing a class of hens or a close pair of hens in the class only if the hens cannot be placed on the pigmentation factor and the handling qualities - abdominal capacity factor.

4. Constitutional Vigor and Vitality

A hen must be healthy and vigorous to produce a large number of eggs for a long period of time. An active hen appears vigorous, alert, and quick in her movements.

5. Head and Head Parts

The ideal head of a hen will have a short, strong, and slightly curved beak (if not debeaked). The eyes will be bright and full. The skull will be flat from side to side. The comb and wattles will be large and feel velvety soft and warm when touched.

SCORECARD FOR PRODUCTION HENS

Characteristics and Qualities		Percent Emphasis
1.	Pigmentation	40
2.	Handling Qualities and Abdominal Capacity	25
3.	Plumage Condition and Molt	20
4.	Constitutional Vigor and Vitality	10
5.	Head and Head Parts	5
	Total	100

NOTES:

EXERCISE #1 - Judging Production Hens

Circle the T preceding the True statements and the F preceding the False statements:

T F 1. A White Leghorn exhibits yellow pigment in the body parts.

T F 2. Pigmentation is the most important single factor in judging a White Leghorn hen for past production.

T F 3. Yellow pigment fades from body parts as a result of egg production, and the rate of fading is a guide to present egg production.

T F 4. Eyering pigment fades before vent pigment fades.

T F 5. Pigment fades from the entire beak after a hen lays an average of 12 eggs.

T F 6. A White Leghorn hen laying eggs steadily for seven months would have yellow shanks and a white beak.

T F 7. All shank pigment fades from a hen after laying an average of 180 eggs.

T F 8. Pigment normally returns to body parts about three times faster than it fades from body parts.

T F 9. Handling qualities of a hen are an indicator of past production rather than present production.

T F 10. Handling quality is the most important factor to consider in selecting hens.

T F 11. The width between the pelvic bones is greater in a laying hen than in a non-laying hen.

T F 12. The abdomen of a laying hen is wide, soft, and expanded.

T F 13. The pelvic bones of a non-laying hen are thin and flexible.

T F 14. Hens usually discontinue egg laying during the molting period.

T F 15. Rate of molt is determined by observing the primary feathers.

T F 16. Fast molting hens are more likely to be high egg producers than are slow molting hens.

T F 17. High producing hens usually molt during the summer or early fall.

T F 18. The feathers of a non-laying hen are usually frayed, ragged, dirty, and dull.

T F 19. A laying hen is vigorous, alert, and quick in her movements.

T F 20. The comb and wattles of a non-laying hen are usually large and feel velvety soft and warm when touched.

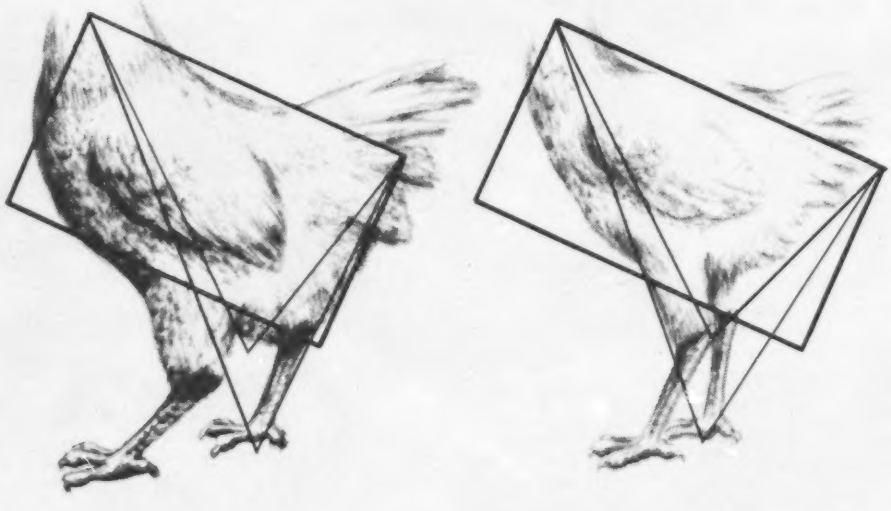
JUDGING PRODUCTION PULLETS

The production pullet class shall be made up of birds of the same age (20-22 weeks) and raised under the same environmental conditions. The birds shall be judged on the basis of potential productive capacity as layers. A high level of competence in performing this management skill influences the success of the poultry enterprise.

Judging and placing of production pullets shall be governed by the following characteristics and qualities:

1. Body Conformation

A pullet having good conformation will have a deep, broad body and a large heart girth. The back of a pullet with good conformation will be broad, flat, and relatively long. The keel bone will be large and long. A pullet should have an angular form as described in the section "Interpretation of Standards for Judges--Flock Inspectors--Breeders" of the American Standard of Perfection.



Pullet of good conformation will have a body that nearly fills a rectangle.

Pullet of poor conformation will have a body that approaches a triangular shape.

2. Sexual Maturity

Sexual maturity is expressed in the development of comb and head. Early sexual maturity should not be encouraged at the expense of growthiness and ruggedness in skeletal development. In other words, size of development

should be preferable to sexual maturity. For example, when other factors are comparable, a sexually mature pullet with a relatively small, poorly-developed body would be placed below a sexually immature pullet having a large, well-developed body.

3. Head

The head is a good indicator of vitality. A good head is described as being strong, moderately long, and well filled in forward to the eyes to avoid any appearance of crow-headedness. The top of the skull will be flat rather than round. The face will be clean-cut, smooth, and free of wrinkles. Eyes will be large, bright, and prominent. The comb will be large and brightly colored.

4. Feet and Toes

The pullet should be well-balanced on her legs. The feet and toes should be normal. No emphasis should be placed on pigmentation.

5. Plumage Condition and Skin Color

A pullet should be fully feathered with good quality plumage. The skin should be of good healthy color.

SCORECARD FOR PRODUCTION PULLETS

Characteristics and Qualities		Percent Emphasis
1.	Body Conformation	40
2.	Sexual Maturity	35
3.	Head	10
4.	Feet and Toes	10
5.	Plumage Condition and Skin Color	5
	Total	100

NOTES:

EXERCISE #2 - Judging Production Pullets

Write TRUE in the blank space preceding each true statement and FALSE in the blank space preceding each false statement:

_____ 1. A pullet is judged on the basis of her potential productive capacity as a layer.

_____ 2. A high quality pullet will have a body that approaches the shape of a triangle.

_____ 3. The keel bone of a high quality pullet will be long.

_____ 4. A sexually mature pullet will have a well developed comb and head.

_____ 5. A pullet should have a large and brightly colored comb.

_____ 6. A sexually mature pullet is preferable to a pullet with excellent body conformation.

_____ 7. The top of a pullet's head should be round rather than flat.

_____ 8. Pigmentation is an important factor in judging a pullet for future production.

_____ 9. A high quality pullet will be well-balanced on her legs.

_____ 10. A pullet should be fully feathered with good quality plumage.

PLACING COMPARISON CLASSES

The production pullet class and the two production hen classes are often referred to as comparison classes. Four birds make up a comparison class. Each bird in the class is compared with the other birds in the class. Each bird is also compared with a mental image of the ideal bird.

The final placing of the birds in the class is determined after all four birds have been compared with each other. Taking brief and accurate notes when evaluating each bird may be helpful in reaching a decision. In addition, grouping the birds within a class will reduce the number of decisions to be made. Placing birds by grouping is a process of elimination. Ways of grouping a class are: a top bird, a bottom bird, a top pair of birds, a middle pair of birds, and a bottom pair of birds.

EXAMINING BIRDS IN COMPARISON CLASSES

With a knowledge of the factors required to judge and place a class of birds in mind, practice examining classes of production hens and production pullets.

The usual procedure in examining a comparison class of birds is to first observe all the birds while they are in their coops. Second, examine the birds closely by handling each bird outside the coop.

In judging a class of production pullets, examine all birds while they are in their coops for (1) size of body development, (2) development of comb and head, and (3) characteristics of head, feet, toes, and plumage. If all or groups of birds in the class cannot be compared in this manner, handle each bird and examine the body for these same factors. Note: In most contests, pullets must be handled to determine body conformation.

In judging a class of production hens, examine all birds while they are in their coops for (1) bleaching of pigment, (2) condition of plumage, (3) vigor and vitality, and (4) head characteristics. If all or groups of birds in the class cannot be compared in this manner, handle each bird and examine the body for these same factors. Note: Each hen must be handled to determine (1) handling qualities and abdominal capacity and (2) rate of molt.

When handling birds, exercise care to prevent the wings from flapping and the birds from struggling to avoid bruises and other types of injuries. Practice handling birds after studying the section "Proper Handling of Birds."

NOTES:

PROPER HANDLING OF BIRDS

I. The step-by-step procedures for properly removing a bird from a coop, holding the bird, and returning the bird to the coop are described and shown as follows:

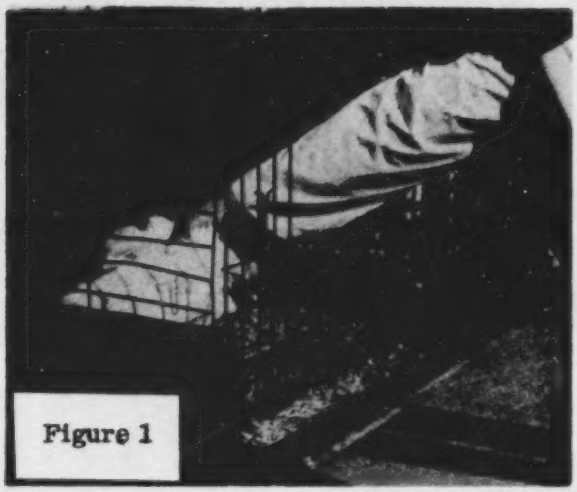


Figure 1

Figure 2

Step 1 - Approach the coop slowly. Open the door quietly. Maneuver the bird until it stands with its head to your right or left. Reach into the coop and over the back of the bird with the right hand (left hand if left handed). Firmly but gently grasp the most distant wing at the shoulders. (Figure 1)

Step 2 - Rotate the bird's body until its head is pointing toward the open coop door. Lift bird to allow insertion of free hand under breast of bird. (Figure 2)

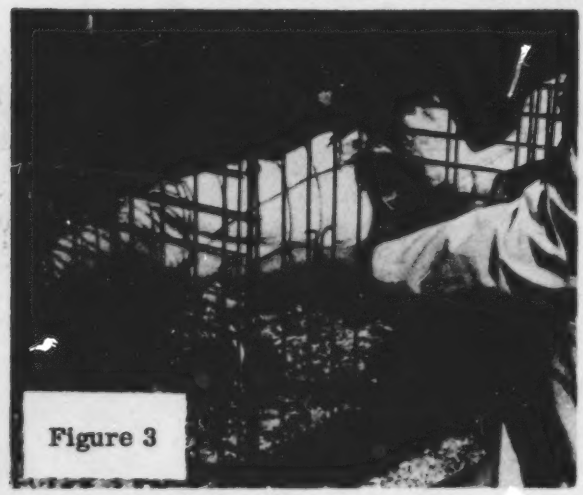


Figure 3

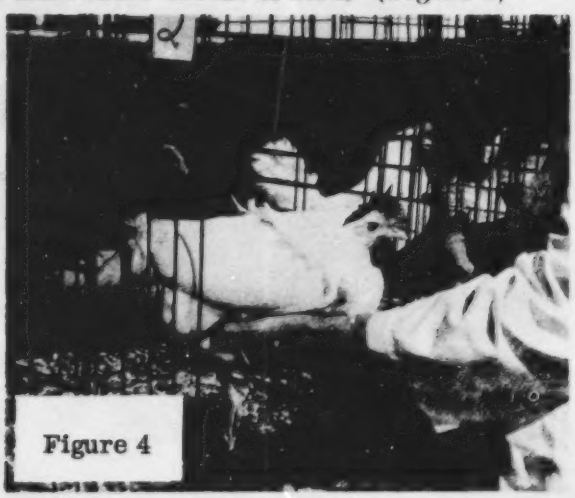


Figure 4

Step 3 - Slide the free hand with palm upward under the bird's breast. Grasp the bird's right leg above the hock joint with the thumb and index finger while grasping the bird's left leg above the hock joint with the index and middle fingers (See Figure 5 for position of fingers). Hold the legs gently but firmly. Lift bird from coop floor with keel bone resting on palm of hand. (Figure 3)

Step 4 - Remove bird (head first) from coop. Keep bird's head pointing toward you. Release the bird's wing. (Figure 4)

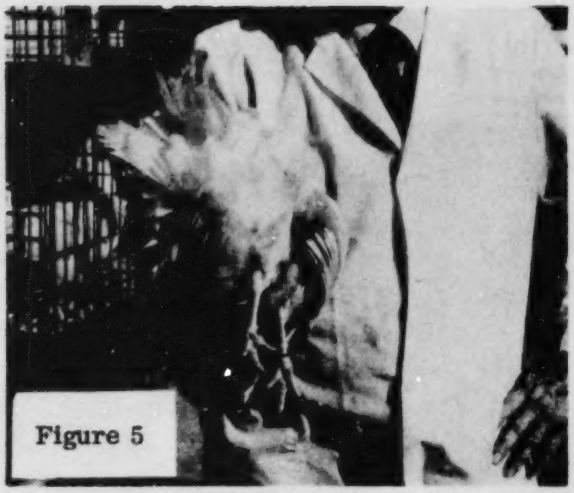


Figure 5

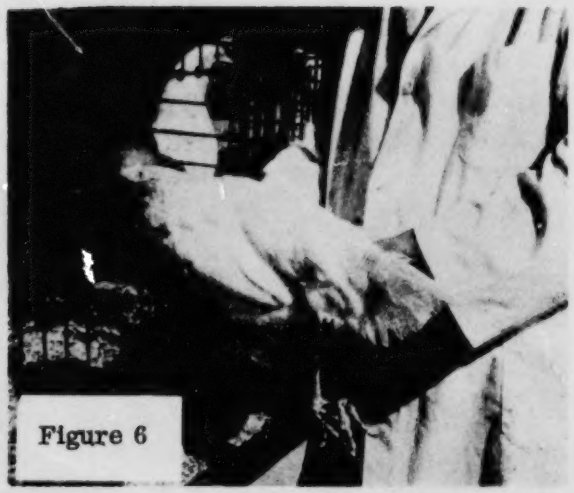


Figure 6

Step 5 - Hold bird with breast on palm of hand and fingers positioned around legs as described in Step 3. After holding bird in this position momentarily, examine the bird with the free hand. (Figure 5)

Step 6 - Return bird (head first) to coop with both hands. Lower bird gently to floor of coop. Release the bird. Remove hands from coop and quietly close coop door. (Figure 6)

II. The procedures generally used to evaluate body conformation of a production pullet are described and shown as follows:

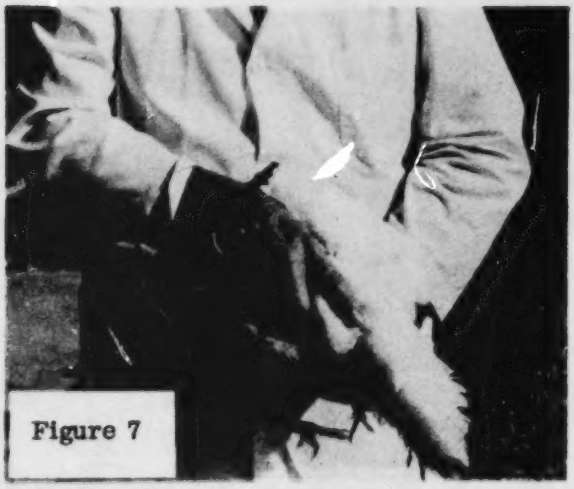


Figure 7

Figure 8

Step 1 - Place palm of hand on bird's back and behind wings. Extend fingers down the back. Slide hand on bird's back toward tail base to determine length of back. (Figure 7)

Step 2 - Place thumb over bird's back and behind wings. Extend other fingers over breast bone to determine depth of body. (Figure 8)

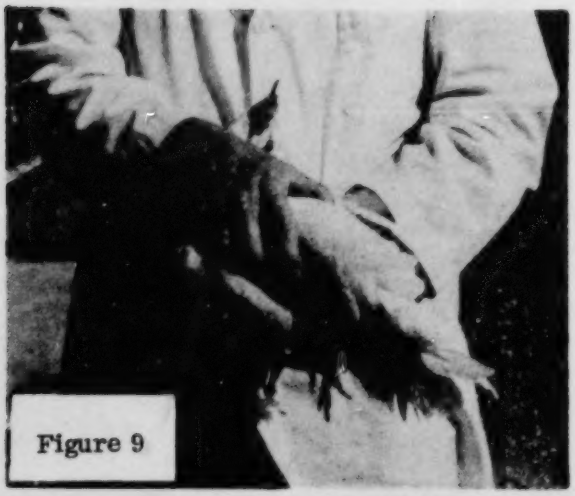


Figure 9

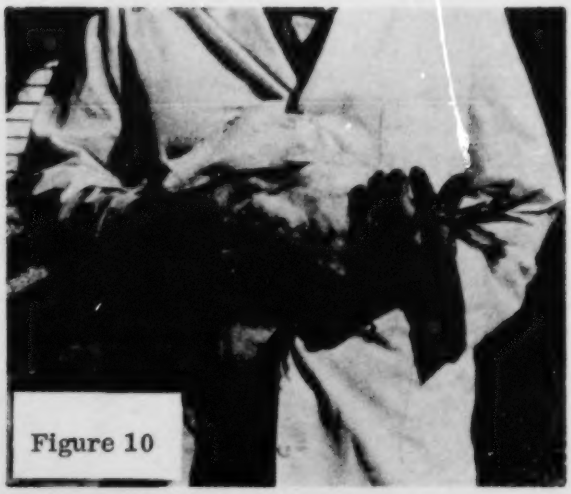


Figure 10

Step 3 - Place palm of hand on back of bird. Place thumb on one side of bird and downward toward breast bone. Extend other fingers over bird's other side and downward toward breast bone to determine heart girth circumference. (Figure 9)

Step 4 - Place palm of hand on breast bone of bird. Extend fingers toward rear of bird. Slide hand to rear of keel bone to determine length of keel bone. (Figure 10)

III. The procedures generally used to evaluate pigmentation of a production hen are described and shown as follows:

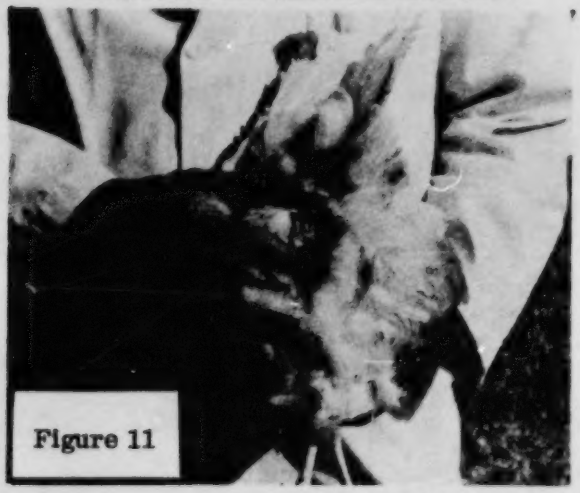


Figure 11

Figure 12

Step 1 - Examine bird's vent for bleaching of pigmentation by spreading feathers and vent with index and middle finger. (Figure 11)

Step 2 - Examine eyering, ear lobe, and beak of bird for bleaching of pigmentation. Place index finger under bird's beak. Keep thumb free to examine ear lobe. (Figure 12)

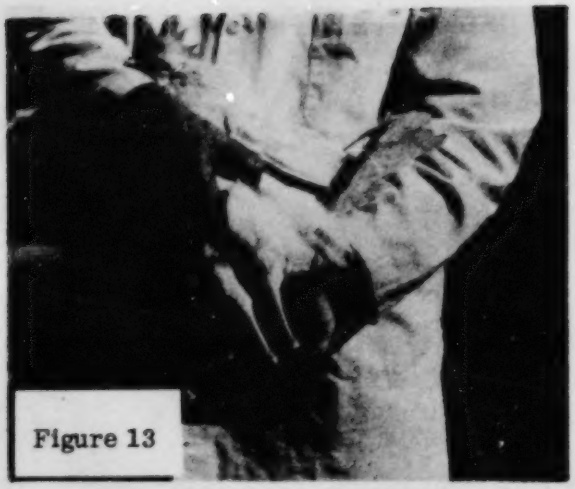


Figure 13

Figure 14

Step 3 - Examine bottom of feet, front of shanks, and rear of shanks of bird for bleaching of pigmentation. Use one hand to hold bird's body. Examine bird's feet and shanks with free hand. (Figure 13)

Step 4 - Examine hock and top of toes of bird for bleaching of pigmentation. Hold bird's body in both hands and examine hocks with fingers of both hands. (Figure 14)

IV. The procedures generally used to evaluate handling qualities and abdominal capacity of a production hen are described and shown as follows:

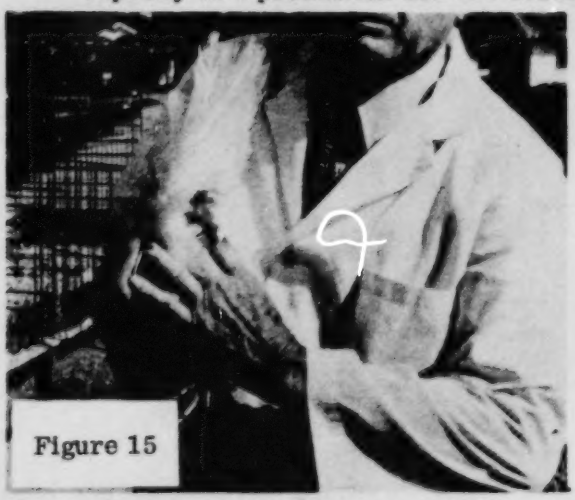


Figure 15

Figure 16

Step 1 - Examine abdomen of bird for handling qualities. Determine spread between pelvic bones with fingers of free hand. (Figure 15)

Step 2 - Determine spread between pelvic bones and keel bone with fingers of free hand. (Figure 16)

THE STANDARD FFA JUDGING CONTEST PLACING CARD

The Standard FFA Judging Contest Placing Card (Form 2) is used by the poultry judging contestant to designate the placing of a comparison class. The placing card must be properly completed in order for contest officials to (1) score the placing and (2) tabulate the score of the contestant.

The suggested procedure for properly completing a placing card is described below. In addition, an example of a properly completed placing card is illustrated. [Note: A copy of the actual placing card used in area and state contests has been reproduced on page 51 of this handbook. In addition, copies of the grading cards (Forms 9, 10-A, 10-B, and 10-C) used in the area and state judging contests have also been reproduced and can be found on pages 52 and 53 of this handbook.]

Form 2 Contestant No. C-14

JUDGING CONTEST PLACING CARD

Class No. 2

Class Name PRODUCTION MENS

Tabulator's Score

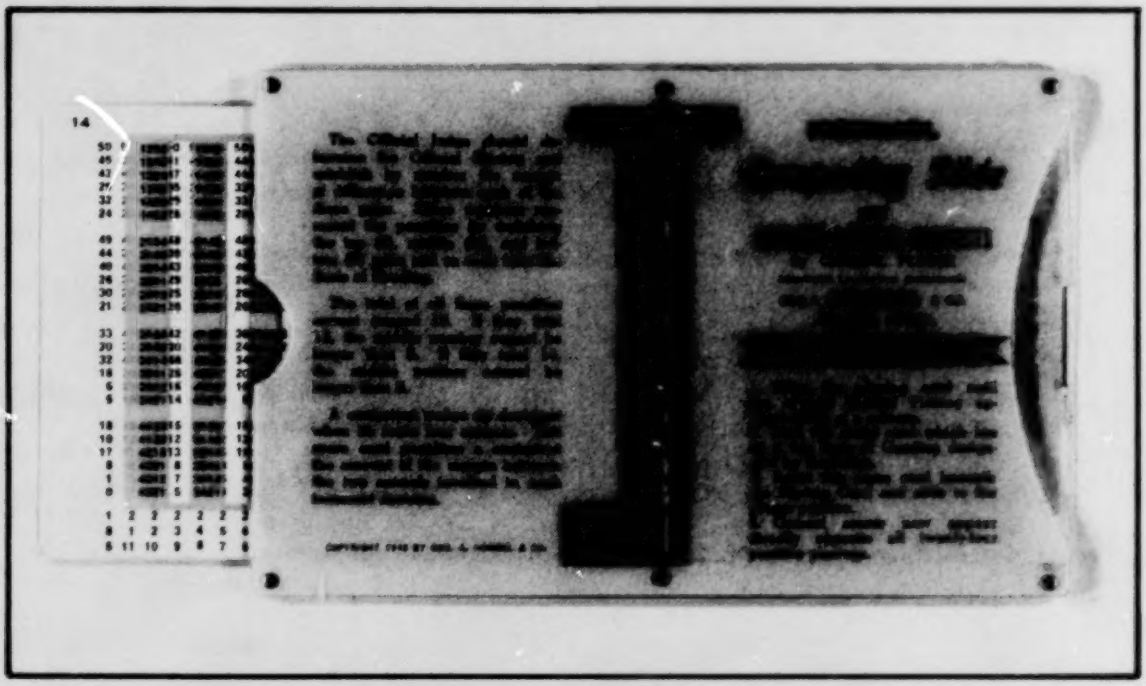
PLACINGS	CHECK PLACING	
1-2-3-4		1
1-2-4-3		2
1-3-2-4		3
1-3-4-2		4
1-4-2-3		5
1-4-3-2		6
2-1-3-4		7
2-1-4-3		8
2-3-1-4		9
2-3-4-1	✓	10
2-4-1-3		11
2-4-3-1		12
3-1-2-4		13
3-1-4-2		14
3-2-1-4		15
3-2-4-1		16
3-4-1-2		17
3-4-2-1		18
4-1-2-3		19
4-1-3-2		20
4-2-1-3		21
4-2-3-1		22
4-3-1-2		23
4-3-2-1		24

Steps in Completing Form 2

1. The "Contestant No." is entered in the designated blank space. (Contestants are identified by section letter and contestant number by contest officials. In area and state contests, the "Contestant No." is usually placed on the card by contest officials.)
2. The "Class No." and "Class Name" are entered in the designated blank spaces. (The name and number of the class of birds is posted on the coops. Using the incorrect class number may result in lower contestant and team scores.)
3. After the placing of a class has been determined, a check (✓) is entered in the appropriate block space to the right of the placing. (Only one check (✓) is entered, and it is entered inside the block space.)
4. The information placed on the card is reviewed for completeness prior to turning the placing card in to contest officials.

THE HORMEL COMPUTING SLIDE FOR SCORING JUDGING CONTESTS

The Hormel Computing Slide is used by judging contest officials to prepare an official placing card for scoring placing cards of contestants.



Contest officials obtain from the official judge the (1) "Official Placing" of the class and (2) "Basis of Grading," that is, the numerical difference (referred to as "cut") between each of the three pairs (top, middle, and bottom) in the comparison class. The three "cuts" are totaled, and the total figure cannot exceed fifteen points.

Using the information provided by the official judge and following the directions printed on the Hormel Computing Slide, the contest officials obtain correct scores for all twenty-four possible placings of the comparison class. These scores are then entered on an official placing card used to score the contestants' placing cards.

The above illustration of a Hormel Computing Slide shows the 24 possible placings and respective scores for a comparison class having an "official placing" of 2 - 3 - 4 - 1 and "cuts" of 5 - 1 - 8 totaling 14.

NOTES:

23

GRADING READY-TO-COOK BROILERS, FRYERS, OR ROASTERS AND TURKEYS

Dressed poultry and ready-to-cook poultry are graded for class, condition, and quality by official graders. "Dressed poultry" refers to poultry slaughtered for human consumption, with head, feet, and viscera intact, and from which blood and feathers have been removed. After evisceration and removal of head and feet, dressed poultry are referred to as "ready-to-cook poultry."

In poultry judging contests, only whole carcasses of chickens and turkeys are selected for ready-to-cook poultry classes. Although carcass parts and poultry products are eligible for grading, very few birds are graded at points other than processing plants, and these birds must be in a form which makes it possible to examine the entire carcass.

Determination of factors indicating presence of disease and unwholesomeness are made by inspectors before carcasses reach graders. Since these factors are not considered in grading carcasses, poultry judging contestants should consider only those factors relating to quality when grading ready-to-cook carcasses.

Grading competency can be increased if the contestant follows a systematic order of evaluating each carcass. The contestant should view the carcass at the same distance as is used for reading. The contestant should thoroughly examine all parts of the carcass by slowly turning the shackles holding the carcass.

The contestant is to determine a final grade of either A, B, or C quality for each carcass based upon the "Standards of Quality for Ready-To-Cook Poultry Carcasses." The contestant is to consider only those factors of quality necessary to grade the carcasses in the class. For example, if all carcasses are A quality for factors of conformation, fleshing, fat covering, and freedom from pinfeathers and discolorations, then only factors of exposed flesh, disjointed bones, broken bones, and missing parts need to be considered in grading each individual carcass. In addition, the final grade given a carcass is to be based on the factor having the lowest grade. For example, a final grade of B quality would be given a carcass meeting the requirements for A quality in all factors except one and appraised a B quality in the one factor.

NOTES:

STANDARDS OF QUALITY
FOR
READY-TO-COOK POULTRY
CARCASSES*

A QUALITY CARCASS

CONFORMATION. The carcass is free of deformities detracting from its appearance or affecting the normal distribution of flesh. Slight deformities such as slightly curved or dented breastbones and slightly curved backs may be present.

BROILER-FRYER

TURKEY

CONFORMATION OF "A" QUALITY CARCASSES

FLESHING. The carcass has a well-developed covering of flesh.

(1) The breast is moderately long and deep and has sufficient flesh to give it a rounded appearance with the flesh carrying well up to the crest of the breastbone along its entire length.
(2) The leg is well fleshed and moderately thick and wide at the knee and hip joint area and has a well-rounded, plump appearance with the flesh carrying well down toward the hock and upward to the hip joint area.
(3) The drumstick is well fleshed and moderately thick and wide at the knee joint and has a well-rounded, plump appearance with the flesh carrying well down toward the hock.
(4) The thigh is well to moderately fleshed.
(5) The wing is well to moderately fleshed.

FAT COVERING. The carcass has a well-developed layer of fat in the skin. The fat is well distributed. There is a noticeable amount of fat in the skin in the areas between the heavy feather tracts.

PINFEATHERS. The carcass has a clean appearance, especially on the breast. The carcass is free of visible pinfeathers, diminutive (extremely small) feathers, and hair.

* A summary of these standards is provided in Table 1.

EXPOSED FLESH. The carcass is free of exposed flesh resulting from cuts, tears, and missing skin (other than slight trimming on the edge) on the breast and legs. Elsewhere the carcass may have exposed flesh due to slight cuts, tears, and areas of missing skin, provided the aggregate of the areas of flesh exposed does not exceed the area of a circle of the diameter specified in Table 1.

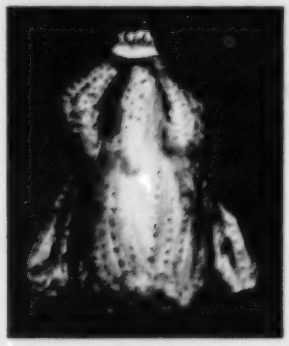
DISCOLORATIONS OF THE SKIN AND FLESH. The carcass is practically free of such defects. Discoloration due to bruising shall be free of clots (recognizable clumps of red or dark cells). Evidence of incomplete bleeding, such as more than an occasional slightly reddened feather follicle, is not permitted. Flesh bruises and discolorations of the skin such as "blue back" are not permitted on the breast or legs of the carcass, and only lightly shaded discolorations are permitted elsewhere. The total areas affected by flesh bruises, skin bruises, and discolorations such as "blue back" singly or in any combination shall not exceed one-half of the total aggregate area of permitted discoloration. The aggregate area of all discolorations for a carcass shall not exceed the area of a circle of the diameter specified in Table 1.

DISJOINTED AND BROKEN BONES AND MISSING PARTS. The carcass is free of broken bones and has not more than one disjointed bone. The wing tips may be removed at the joint. The tail may be removed at the base. Cartilage separated from the breastbone is not considered as a disjointed or broken bone.

B QUALITY CARCASS

CONFORMATION. The carcass may have moderate deformities (such as a dented, curved or crooked breast, or crooked back, or misshapen legs or wings) not materially affecting the distribution of flesh or the appearance of the carcass.

BROILER-FRYER



TURKEY

CONFORMATION OF "B" QUALITY CARCASSES

FLESHING. The carcass has a moderate covering of flesh.

(1) The breast has a substantial covering of flesh with the flesh carrying up to the crest of the breastbone sufficiently to prevent a thin appearance.
(2) The leg is fairly thick and wide at the knee and hip joint area and has sufficient flesh to prevent a thin appearance.
(3) The drumstick has a sufficient amount of flesh to prevent a thin appearance with the flesh carrying fairly well down toward the hock.
(4) The thigh has a sufficient amount of flesh to prevent a thin appearance.
(5) The wing has a sufficient amount of flesh to prevent a thin appearance.

FAT COVERING. The carcass has sufficient fat in the skin to prevent a distinct appearance of the flesh through the skin, especially on the breast and legs.

PINFEATHERS. The carcass may have a few nonprotruding pinfeathers or vestigial (minute, very small) feathers which are scattered sufficiently to not appear numerous. Not more than an occasional protruding pinfeather or diminutive (extremely small) feather shall be in evidence under careful examination.

EXPOSED FLESH. The carcass may have exposed flesh resulting from cuts, tears, and missing skin, provided the aggregate of the areas of flesh exposed does not exceed the area of a circle of the diameter specified in Table 1.

A carcass meeting the requirements of A quality for fleshing may be trimmed to remove skin and flesh defects, provided no more than one-third of the flesh is exposed on any part and the meat yield of any part is not appreciably affected.

DISCOLORATIONS OF THE SKIN AND FLESH. The carcass is free of serious defects. Discoloration due to bruising shall be free of clots (recognizable clumps of red or dark cells). Evidence of incomplete bleeding shall be no more than very slight. Moderate areas of discoloration due to bruises in the skin or flesh and moderately shaded discoloration of the skin such as "blue back" are permitted, but the total areas affected by such discolorations singly or in any combination may not exceed one-half of the total aggregate area of permitted discoloration. The aggregate area of all discolorations for a carcass shall not exceed the area of a circle of the diameter specified in Table 1.

DISJOINTED AND BROKEN BONES AND MISSING PARTS. The carcass may have two disjointed bones or one disjointed bone and one nonprotruding broken bone. Parts of the wing beyond the second joint may be removed at a joint. The tail may be removed at the base. The back may be trimmed in an area not wider than the base of the tail and extended from the tail to the area half way between the base of the tail and the hip joints.

C QUALITY CARCASS

A carcass not meeting the requirements for A quality or B quality may be of C quality. Both wings may be removed or neatly trimmed. Trimming of the breast and legs is permitted but not to the extent the normal meat yield is materially affected. The back may be trimmed in an area not wider than the base of the tail and extending from the tail to the area between the hip joints.

NOTES:

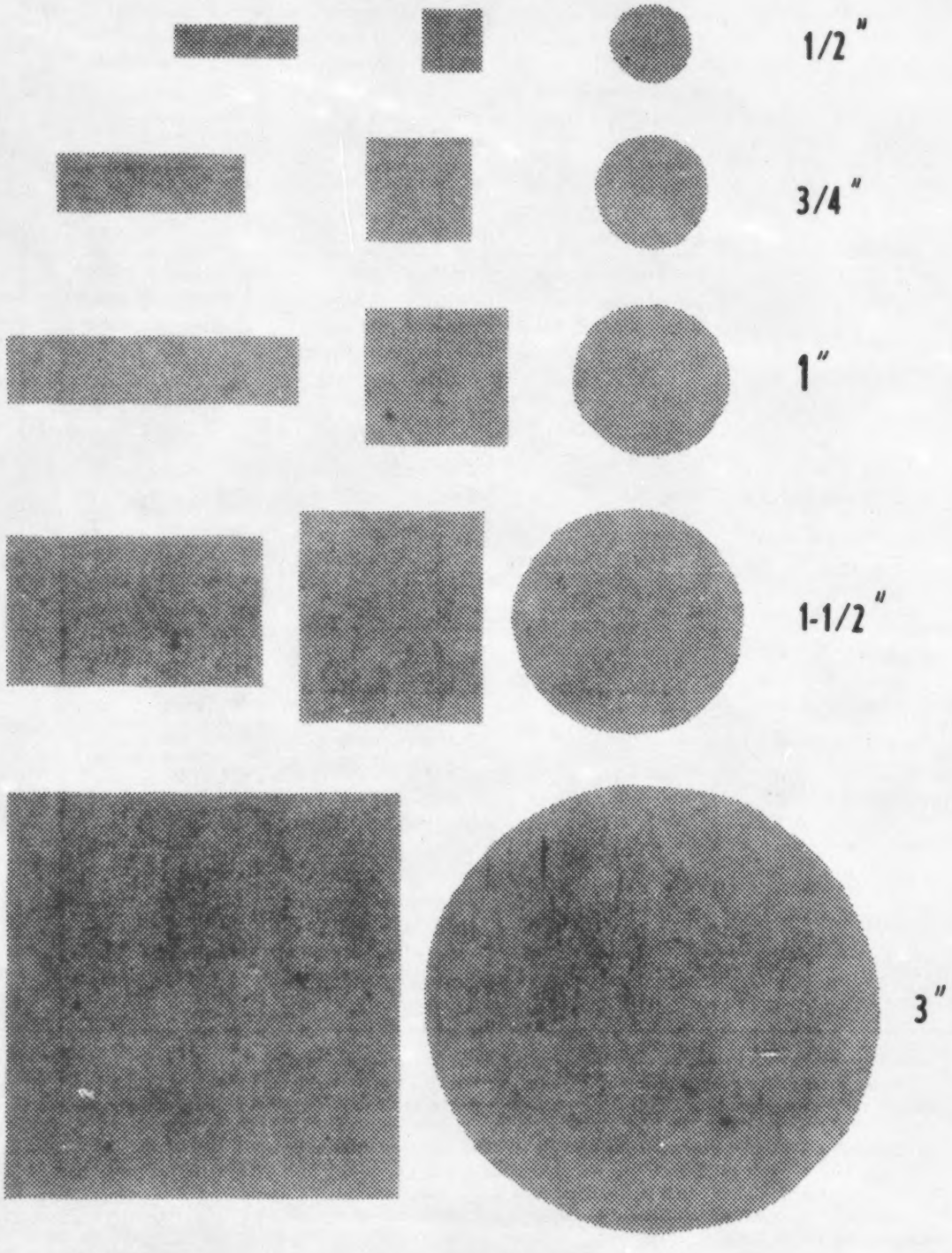
Table 1 - SUMMARY OF SPECIFICATIONS FOR STANDARDS OF QUALITY FOR INDIVIDUAL CARCASSES OF READY-TO-COOK POULTRY*
(Minimum Requirements and Maximum Defects Permitted)

FACTOR	A QUALITY		B QUALITY		C QUALITY
CONFORMATION:	Normal		Moderate deformities		Abnormal
Breastbone	Slight curve or dent		Moderately dented, curved, or crooked		Seriously curved or crooked
Back	Normal (except slight curve)		Moderately crooked		Seriously crooked
Legs & Wings	Normal		Moderately misshapen		Misshapen
FLESHING:	Well fleshed; moderately long, deep, and rounded breast		Moderately fleshed		Poorly fleshed
FAT COVERING:	Well covered, especially between heavy feather tracts on breast		Sufficient fat on breast and legs to prevent distinct appearance of flesh through the skin		Lacking in fat covering over all parts of carcass
PINFEATHERS:					
Nonprotruding pins & hair	Free		Few scattered		Scattering
Protruding pins	Free		Free		Free
EXPOSED FLESH:[1]	Breast & Legs	Elsewhere	Breast & Legs[2]	Elsewhere[2]	
Carcass Weight					
Over 1½-6 lbs.	None	1½"	1½"	3"	No limit
Over 6-16 lbs.	None	2"	2"	4"	No limit
DISCOLORATIONS[3]					
Over 1½-6 lbs.	1"	2"	2"	3"	No limit[4]
Over 6-16 lbs.	1½"	2½"	2½"	4"	No limit[4]
DISJOINTED BONES	1		2 disjointed & no broken or		No limit
BROKEN BONES	None		1 disjointed & 1 nonprotruding broken		No limit
MISSING PARTS	Wing tips and tail		Wing tips, 2nd wing joint, and tail		Wing tips, wings, and tail
			Back area not wider than base of tail and extending half way between base of tail and hip joints		Back area not wider than base of tail extending to area between hip joints

[1] Total aggregate area of flesh exposed by all cuts, tears, and missing skin.
[2] A carcass meeting the requirements of A quality for fleshing may be trimmed to remove skin & flesh defects, provided no more than 1/3 of the flesh is exposed on any part & the meat yield is not appreciably affected.
[3] Flesh bruises & discolorations such as "blue back" are not permitted on breast & legs of A quality birds. Not more than 1/2 of total aggregate area of discolorations may be due to flesh bruises or "blue back" (when permitted) & skin bruises in any combination.
[4] No limit on size & number of areas of discoloration & flesh bruises if such areas do not render any part of the carcass unfit for food.

*Adapted from Poultry Grading Manual - Agriculture Handbook No. 31.

GUIDE FOR ESTIMATING SIZE OF AREAS HAVING EXPOSED FLESH AND DISCOLORATIONS



EXERCISE #3 - Grading Ready-To-Cook Broilers, Fryers, or Roasters

Indicate the USDA Quality Grade of each carcass by placing the letter A, B, or C in the blank space preceding each statement. All other carcass quality factors are considered normal. (Carcass Weight: over 1 1/2 - 6 lbs.)

_____ 1. Both wing tips are missing.

_____ 2. A wing has one disjointed bone.

_____ 3. The breast bone has a slight dent.

_____ 4. The bone in a drumstick is broken but nonprotruding.

_____ 5. All skin is missing from the breast.

_____ 6. The tailhead is missing.

_____ 7. A wing is missing at the second joint.

_____ 8. A wing has two disjointed bones.

_____ 9. A thigh has a $1\frac{1}{4}$-inch skin tear.

_____ 10. The breast is poorly fleshed.

_____ 11. The back is seriously crooked.

_____ 12. A drumstick has a 3-inch skin tear.

_____ 13. A bone in a wing is broken and protruding.

_____ 14. An entire wing is missing.

_____ 15. A drumstick has a $\frac{1}{2}$-inch skin tear.

_____ 16. The back has three 1-inch skin tears.

_____ 17. Each wing has a broken and protruding bone.

_____ 18. Two bones of a wing are broken but nonprotruding.

_____ 19. The back has a 2-inch skin tear.

_____ 20. The back area (not wider than base of tail and extending to area between hip joints) is cut out of the carcass.

_____ 21. The tailhead and both wing tips are missing.

_____ 22. The entire carcass is lacking in fat covering.

_____ 23. The carcass has a few scattered nonprotruding pins and hair.

_____ 24. A drumstick has a one-inch skin bruise.

_____ 25. A drumstick is disjointed, and a wing bone is broken but nonprotruding.

EXERCISE #4 - Grading Ready-To-Cook Turkeys

Indicate the USDA Quality Grade of each carcass by placing the letter A, B, or C in the blank space preceding each statement. All other carcass quality factors are considered normal. (Carcass Weight: over 6 - 16 lbs.)

_____ 1. The breast has a 2-inch skin tear.

_____ 2. A drumstick is disjointed.

_____ 3. The tailhead and both wing tips are missing.

_____ 4. The breastbone is moderately crooked.

_____ 5. The breast is moderately fleshed.

_____ 6. A wing tip is missing.

_____ 7. The breast has a $2\frac{1}{2}$-inch skin bruise.

_____ 8. The back has a $2\frac{1}{2}$-inch skin bruise.

_____ 9. One wing has a disjointed bone, and the other wing has a broken nonprotruding bone.

_____ 10. The back has a 6-inch skin tear.

_____ 11. The breast has a 3-inch skin tear.

_____ 12. A wing is missing at the second joint.

_____ 13. The breast is poorly fleshed.

_____ 14. The breastbone is slightly curved.

_____ 15. The back has a 4-inch skin tear.

_____ 16. The breastbone is slightly dented.

_____ 17. Both wings are missing at the second joint.

_____ 18. All skin is missing from the back.

_____ 19. A wing bone is broken but nonprotruding.

_____ 20. Both wings are missing.

_____ 21. The back area (not wider than base of tail and extending half way between base of tail and hip joints) is cut out of the carcass.

_____ 22. One wing has two disjointed bones, and the other wing has one broken nonprotruding bone.

_____ 23. The back is seriously crooked.

_____ 24. The breast and a drumstick have skin tears aggregating to a total area of 2 3/4 inches.

_____ 25. A wing bone is broken and protruding.

EGG GRADING

Grading of shell eggs is the classification of individual eggs according to established standards. United States Standards for Quality of Individual Shell Eggs have been developed on the basis of such factors as condition of the white or yolk, size of the air cell, and cleanness and soundness of the shell. Eggs are also grouped into weight (or size) classes by specifying the minimum weight per unit in ounces per dozen. Although color is not a factor in the U.S. standards and grades, eggs are usually sorted for color and sold as either "whites" or "browns." (Only white or white-tint shell eggs are used in poultry judging contests, and only factors relating to quality are considered in grading.)

Advantages of Grading

Grading aids orderly marketing by reducing waste, confusion, and uncertainty with respect to quality values. Standards of quality satisfy the needs of producers, dealers, and consumers desiring uniform measures of quality. The principal advantage in using official standards and grades for eggs is to furnish an acceptable common language in trading and marketing the product, thus making possible:

1. Impartial official grading which eliminates the need for personal inspection of the eggs by sellers, buyers, and other interested persons.
2. Pooling of lots of comparable quality.
3. Development of improved quality at producer level through "buying on grade" programs.
4. Market price reporting in terms understood by all interested parties.
5. Negotiation of loans on generally accepted quality specifications.
6. A basis for settling disputes involving quality.
7. A basis for paying damage claims.
8. A standard upon which advertising may be based.
9. A uniform basis for establishing brand names.
10. Establishment of buying guides for consumers.

General Application

Standards of quality are used as a basis for establishing grades. Standards of quality apply to the individual eggs; grades apply to lots of eggs such as dozens, 30-dozen cases, and carloads. As egg quality is unstable and grading procedures are largely subjective, it is necessary to provide tolerances in grades for small percentages of eggs of a quality lower than that comprising the major part of the grade. The tolerances are provided to allow for errors in judgment, differences in interpretation, and normal deterioration in quality from the time of grading during a reasonably short period until the eggs are sold to the consumer.

The United States Standards for Quality of Individual Shell Eggs serve not only as a basis for establishing U.S. grades, but also for developing State standards and grades and "commercial" grades. The U.S. standards and grades are permissive; that is, they may or may not be used by individual producers or handlers.

General Quality Factors

Standards of quality are a means of classifying individual eggs according to various groups of conditions and characteristics wanted by consumers. Grades differ from standards. Grades provide tolerances for individual eggs within a lot to be of lower quality than the grade name indicates.

Quality factors may be divided into two general groups:

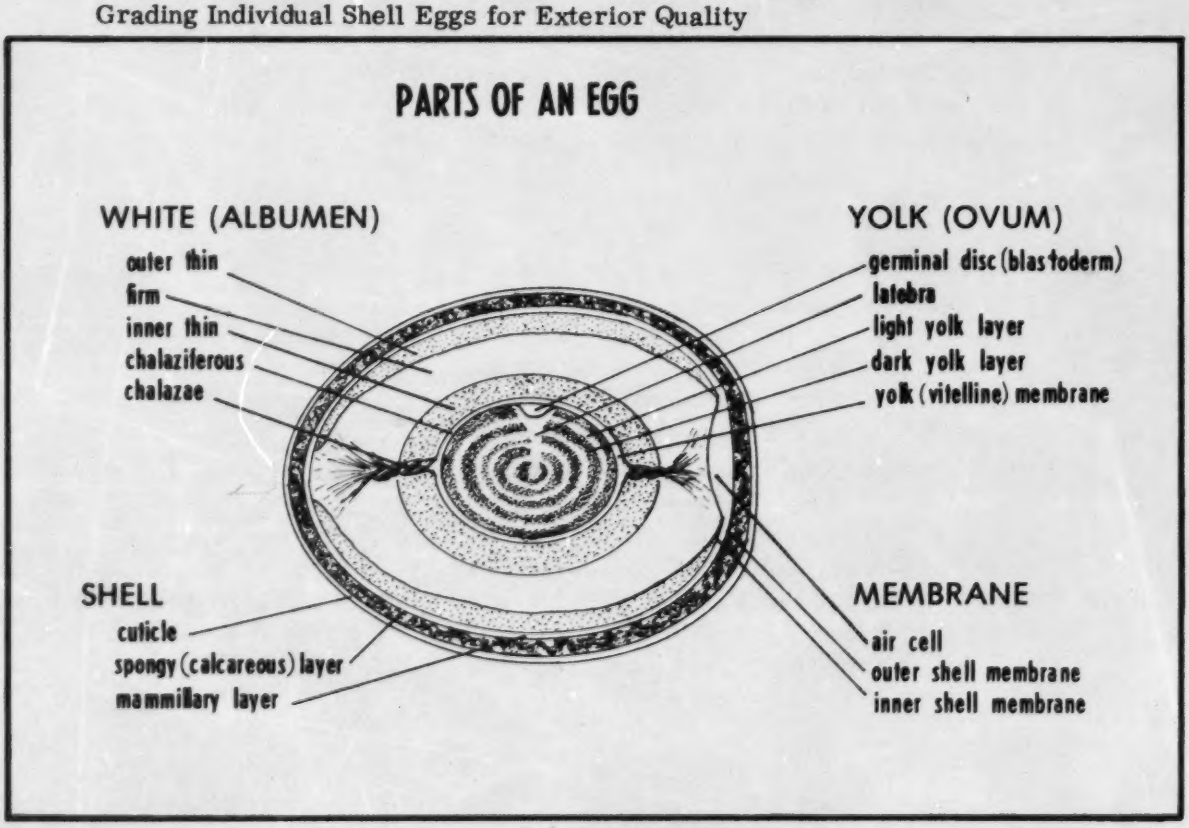
1. Interior quality factors determined by (a) candling or (b) a flock selection method based on breaking out a small number of eggs from each flock.
2. Exterior quality factors determined by external observation.

Automatic equipment and mass scanning devices have practically replaced manual grading of eggs by commercial producers. However, graders should possess basic knowledge of internal and external quality factors considered in commercial grading of eggs.

The purpose of the following sections in this handbook is to describe the internal quality factors of eggs as they appear before a candling light or when broken out for visual examination and to describe the external quality factors of eggs as they appear under direct examination.

To serve as a means of achieving competency and skill in quality grading eggs, poultry judging contests provide the following three egg grading classes for contestants:

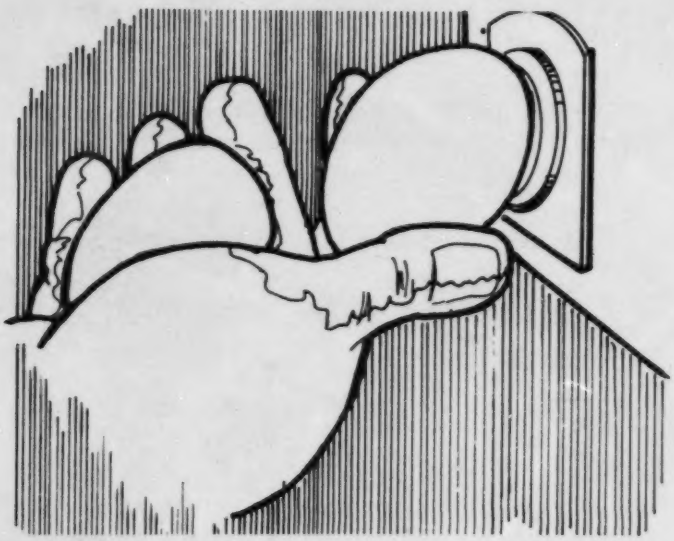
Grading Individual Shell Eggs for Interior Quality
Grading Individual Broken-Out Eggs for Interior Quality
Grading Individual Shell Eggs for Exterior Quality



GRADING INDIVIDUAL SHELL EGGS FOR INTERIOR QUALITY

The contestant is to determine the interior quality of each egg in this class by hand candling.

The egg to be candled is held between the thumb and index finger, and the small end of the egg rests against the second finger. The contents of the egg are set in motion by a movement of the hand and wrist in an arc of about 180 degrees. Stopping the hand and wrist motion at the end of the arc permits the contents to spin inside the shell. The egg is to be placed against the candling aperture while the contents are spinning. The long axis of the egg should be at approximately a 45 degree angle to the candling aperture. The thumb and finger should be on opposite sides of the shell to prevent obstructing the view of the egg's contents.



The contestant should view the candled egg at the same distance as is used for reading. Only the interior qualities of the egg are to be evaluated. (Note: Exterior shell quality factors are not to be considered. If a broken or cracked egg is observed, the contestant should immediately notify a contest official).

The contestant should follow a systematic order of evaluating the air cell, yolk, and white of each egg. A final grade of either AA quality, A quality, B quality, or Loss is determined for each egg based upon the "Standards of Interior Quality for Individual Shell Eggs (Candled Appearance)." These standards are discussed in the following section and summarized in Table 2.

The final grade given an egg is to be based on the factor having the lowest grade. For example, a final grade of A quality would be given an egg meeting the standards for AA quality in all factors except one and appraised an A quality in the one factor.

STANDARDS OF INTERIOR QUALITY FOR INDIVIDUAL SHELL EGGS (CANDLED APPEARANCE)*

Air Cell

When the egg is first laid, it has no air cell or only a small one. Its temperature is about 105 degrees F. As the egg cools to room temperature, the liquids contract more than does the shell. This contraction causes the inner shell membrane to separate from the outer shell membrane and form the air cell. Increase in the size of the air cell beyond that resulting from contraction is due to evaporation of water from the egg. The rate of water evaporation is influenced by age, shell texture, temperature, humidity, and other factors. The air cell is normally at the large end of the egg.

The air cell is one of the first factors observed in candling and can be the determining factor in classifying the individual egg as to interior quality.

Depth of air cell is the only quality factor considered. Movement is not considered a quality factor. The air cell may show unlimited movement and be free or bubbly in all qualities - AA, A, and B.

The maximum size of air cell permitted in the various qualities is as follows:

Quality	Maximum Depth of Air Cell
AA	1/8 inch
A	3/16 inch
B	No limit

The air cell gauge may be used to determine air cell depth when practice grading. The depth of the air cell is measured at the point of greatest distance between the top of the air cell and an imaginary plane passing through the egg at the lower edge of the air cell where it touches the shell.

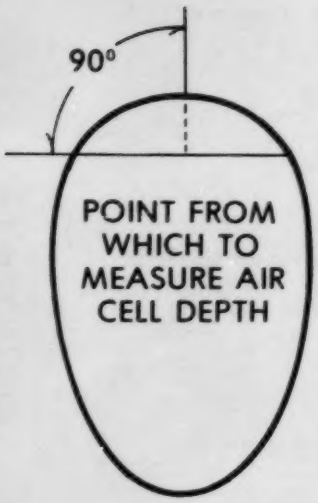
Yolk

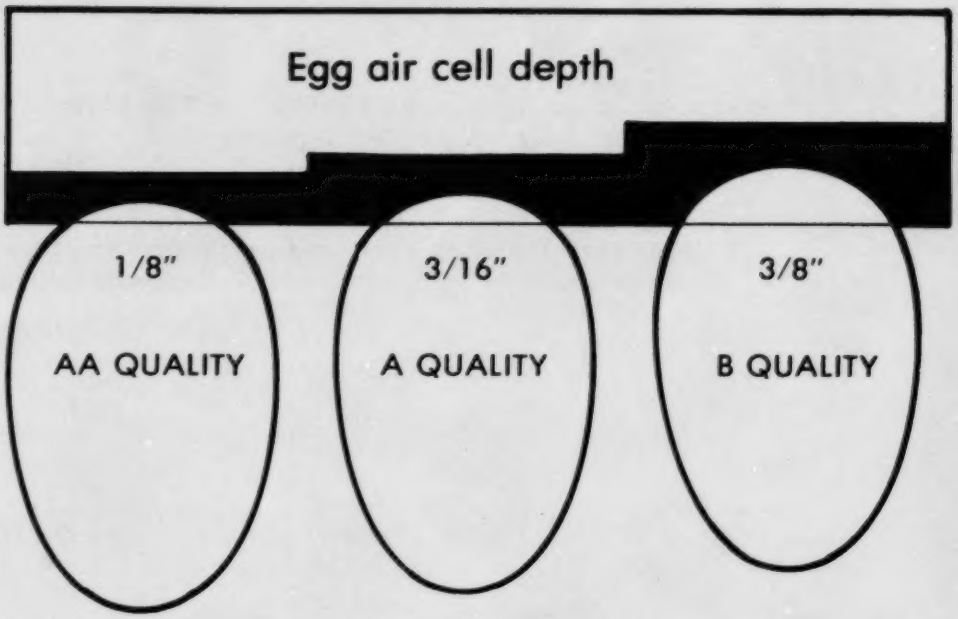
The appearance of the yolk as the egg is twirled in candling is one of the best indicators of the interior quality of shell eggs. The yolk characteristics are determined by the shadow the yolk casts upon the shell by the candling light. The yolk appearance is dependent on the condition of the albumen (egg white).

Three factors considered in judging egg quality by the yolk are (1) size and shape of the yolk, (2) distinctness of yolk shadow outline, and (3) defects and germ development.

* A summary of these standards is provided in Table 2.

MEASURING AIR CELL DEPTH



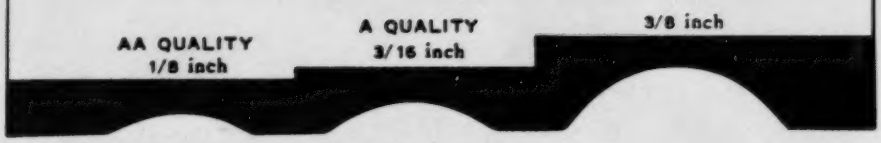


FORM PY-35 (2-82) (Previous editions are obsolete)

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
POULTRY DIVISION

OFFICIAL
EGG AIR CELL GAUGE

(See over)



1. Size and Shape of the Yolk

The yolk of a new-laid egg is round and firm. As the yolk ages, it absorbs water from the albumen and increases in size. This weakens the vitelline membrane and gives the yolk a somewhat flattened shape on top and a general "out-of-round" shape.

Yolk size and shape are described for the B quality of eggs where these factors become apparent. The terms used to describe yolk size and shape in the U.S. standards of quality for shell eggs are:

> Enlarged and flattened--The yolk membranes and tissues have weakened causing the yolk to appear definitely enlarged and flattened. (B Quality)

2. Distinctness of Yolk Shadow Outline

The distinctness of the yolk outline or shadow outline is governed by three factors:

a. Thickness and consistency of the albumen--The thicker the albumen, the less distinct the outline appears.

b. Condition of the yolk--Determined by the presence or absence of blemishes showing up before the candling light as dark shadows in the yolk.

c. Color of the yolk--Except for off-color, the color of the yolk is difficult to determine before the candling light. However, extremes in yolk color may influence the candler's judgment of egg quality. Under some conditions, an extremely deep colored yolk would cast a darker shadow before the candling light than would a lighter yolk.

By concentrating on the yolk outline instead of the depth of the yolk shadow, the grader will minimize the influence of yolk color on quality determinations.

The terms used to define the three degrees of distinctness of yolk shadow outline in the U.S. standards of quality for shell eggs are:

a. Outline slightly defined--The yolk outline is indistinctly indicated and appears to blend into the surrounding white as the egg is twirled. (AA Quality)

b. Outline fairly well defined--The yolk outline is discernible (observable) but not clearly outlined as the egg is twirled. (A Quality)

c. Outline plainly visible--The yolk outline is clearly visible as a dark shadow when the egg is twirled. (B Quality)

3. Defects and Germ Development

Relatively little is known about the exact causes of most yolk defects other than those due to germ development. The relative viscosity of the albumen has a direct bearing on the accurate determination of defects on the yolk before the candling light. Unless yolk defects are very prominent, detection of them is difficult when the egg has a thick albumen.

The terms used to describe yolk defects are:

a. Practically free from defects-The yolk shows no germ development but may show other very slight defects on its surface. (AA and A Quality)

b. Serious defects-A yolk that shows well developed spots or areas and other serious defects, such as olive yolks, that do not render the egg inedible. (B Quality)

c. Clearly visible germ development-Development of the germ spot on the yolk of a fertile egg that has progressed to the point where it is plainly visible as a definite circular area or spot with no blood in evidence. (B Quality)

d. Blood due to germ development-Blood caused by development of the germ in a fertile egg to a point where it is visible as definite lines or as a blood ring. Such an egg is classified as inedible. (Loss)

White

Practically all new-laid eggs contain four layers of albumen-chalaziferous, inner thin, thick, and outer thin. The appearance of the egg before the candling light is governed largely by the relative proportions of the thick and outer thin layers of albumen. The white and yolk are very closely associated, and any discussion of either factor involves the other.

Two important considerations concerning the white are included in standards of quality. These are condition or viscosity and clarity of the white. The condition of the white is determined by the intensity of the yolk shadow and the freedom of yolk movement as the egg is twirled before the candling light. These factors are related to the viscosity of the white. Thick whites permit limited movement of the yolk and an indistinct shadow results. Thin whites permit free movement of the yolk and a distinct shadow results.

The following terms describe the white:

1. Clear-The white is free from discolorations or from any foreign bodies floating in it. (Note: Prominent chalazas should not be confused with foreign bodies such as spots or blood clots.) (AA & A Quality)

2. Firm-The white is sufficiently thick or viscous to prevent the yolk outline from being more than slightly defined or indistinctly indicated when the egg is twirled. (AA Quality)

3. Reasonably firm-The white is somewhat less thick or viscous than a firm white. The white permits the yolk to approach the shell more closely and results in a fairly well defined yolk outline when the egg is twirled. (A Quality)

4. Weak and watery-The white is weak, thin, and generally lacking in viscosity. A weak and watery white permits the yolk to approach the shell closely, thus causing the yolk outline to appear plainly visible and dark when the egg is twirled. (B Quality)

5. Blood spots or meat spots-Small blood spots or meat spots (aggregating not more than one-eighth inch in diameter) may be classified as "B Quality." If larger, or showing diffusion of blood into the white surrounding a blood spot, the egg shall be classified as "Loss." Blood spots shall not be due to germ development. They may be on the yolk or in the white. Meat spots may be blood spots which have lost their characteristic red color or tissue from the reproductive organs.

6. Bloody white-The egg has blood diffused through the white. This condition may be present in new-laid eggs. (Loss)

Loss Eggs

The U.S. standards of quality define certain eggs as "loss."

Loss-The egg is inedible, smashed, broken with contents leaking, cooked, frozen, or contaminated, or contains bloody whites, large blood spots, large unsightly meat spots, or other foreign material.

Inedible eggs are described in the U.S. standards to include black rots, white rots, mixed rots, sour eggs, eggs with green whites, musty eggs, moldy eggs, and eggs with stuck yolks. Eggs showing blood rings and those containing embryo chicks at or beyond the blood ring stage resulting from germ development in fertile eggs are classified as inedible eggs.

"Cooked eggs," when held before the candling light, may be identified by the presence of threadlike shadows in the albumen (slightly cooked) or a dark opaque appearance (completely cooked).

Large "blood spots" appear brilliant red in color (or dark gray in so-called "meat spots") when observed before the candling light.

"Black rots" are generally opaque (with the exception of the air cell) when viewed before the candling light. "White rot" may be detected by the presence of thread-like shadows in the thin white. In later stages the yolk appears severely blemished. "Mixed rot" (addled egg) occurs when the yolk membrane breaks and the yolk mixes with the white resulting in a murky appearance.

"Sour eggs" and "eggs with green whites" are difficult to detect by standard candling methods. The adoption of ultraviolet light (black light) has made detection of these loss egg types easier.

"Musty eggs" appear clear and free from foreign material when viewed before the candling light. They can generally be detected only by the characteristic musty odor coming from the eggs.

"Moldy eggs" can be detected before the candling light by the presence of mold growths on the inside surfaces of the egg shells.

Before the candling light the "stuck yolk" appears attached to the shell and snaps back to its attached position when the twirling motion of the egg is stopped. If loosened from its position, the yolk membrane breaks and permits the yolk contents to seep into the white resulting in a "seeping yolk" and later a "mixed rot."

"Blood rings" appear on the yolk as brilliant blood-red circles from 1/8 to 3/8 inch in diameter.

NOTES:

Table 2 - SUMMARY OF SPECIFICATIONS FOR STANDARDS OF INTERIOR QUALITY FOR INDIVIDUAL SHELL EGGS (CANDLED APPEARANCE)*
(Minimum Requirements and Maximum Defects Permitted)

FACTOR	AA QUALITY	A QUALITY	B QUALITY	LOSS
SHELL[1]	Clean. Unbroken. Practically normal shape, texture, & strength.	Clean. Unbroken. Practically normal shape, texture, & strength.	Clean to slightly stained. Unbroken. Abnormal shape, texture, & strength	Broken with contents leaking.[2]
AIR CELL	1/8 inch or less in depth. Unlimited movement. Free or bubbly.	Over 1/8 inch but not more than 3/16 inch in depth. Unlimited movement. Free or bubbly.	Over 3/16 inch in depth. Unlimited movement. Free of bubbly.	
YOLK	Outline slightly defined. Practically free from defects.	Outline fairly well defined. Practically free from defects.	Enlarged & flattened. Outline plainly visible. Serious defects & clearly visible germ development.	Inedible egg characteristics.[3]
WHITE	Clear. Firm. Free from defects.	Clear. Reasonably firm. Free from defects.	Weak & watery. Small blood or meat spots (total aggregate area not more than 1/8 inch in diameter).	Bloody. Blood or meat spots (total aggregate area over 1/8 inch in diameter). Inedible egg characteristics.[3]

[1] Exterior shell quality factors are not to be considered when grading eggs for interior quality.

[2] Standards of quality provide three additional egg qualities--Dirty (but unbroken), Check (contents not leaking), and Leaker (contents leaking).

[3] Definite blood lines or blood ring on germinal disc, embryo chick at or beyond blood ring stage, black rot, white rot, mixed rot, sour egg, green white, musty egg, moldy egg, stuck yolk, and other foreign material.

* Adapted from Egg Grading Manual - Agriculture Handbook No. 75.

EXERCISE #5 - Grading Individual Shell Eggs for Interior Quality
(Candled Appearance)

Indicate the USDA Quality Grade of each egg by placing the letter AA, A, B, or L (for Loss) in the blank space preceding each statement. All other interior quality factors are considered normal.

_____ 1. The yolk outline is slightly defined.

_____ 2. The air cell is 1/8 inch in depth.

_____ 3. The yolk outline is plainly visible.

_____ 4. The white is clear and reasonably firm.

_____ 5. The air cell is 1/16 inch in depth and moves freely.

_____ 6. The air cell is bubbly and $\frac{1}{4}$ inch in depth.

_____ 7. The albumen is bloody.

_____ 8. The white is weak and watery.

_____ 9. The air cell is 3/16 inch in depth.

_____ 10. Small areas of mold appear directly under the shell.

_____ 11. The yolk is enlarged and flattened.

_____ 12. The yolk outline is fairly well defined.

_____ 13. The air cell is free and 3/16 inch in depth.

_____ 14. A meat spot (3/16 inch in diameter) is attached to the chalazae.

_____ 15. The yolk is stuck to the shell membrane.

_____ 16. The air cell is 3/8 inch in depth but not movable.

_____ 17. The white is clear and firm.

_____ 18. The air cell is 5/16 inch in depth and moves freely.

_____ 19. A small blood ring appears on the yolk.

_____ 20. The chalazae is large and prominent.

GRADING INDIVIDUAL BROKEN-OUT EGGS FOR INTERIOR QUALITY

Eggs used in this class are broken out into petri dishes and covered to keep out foreign material and to maintain egg quality over a longer period of time. The eggs are not to be handled by the contestant.

The contestant should view each broken-out egg at the same distance as is used for reading. Quality of yolk and albumen is the basis for evaluation.

The contestant is to determine for each egg a final grade of either A quality, B quality, or Loss based upon the "Standards of Interior Quality for Individual Shell Eggs (Broken-Out Appearance)." (Note: When grading broken-out eggs, only the A quality grade is used to designate both AA and A quality eggs.)

The final grade given an egg is to be based on the factor having the lowest grade. For example, a final grade of B quality would be given an egg meeting the standards for A quality in all factors except one and appraised a B quality in the one factor.

STANDARDS OF INTERIOR QUALITY FOR INDIVIDUAL SHELL EGGS (BROKEN-OUT APPEARANCE)*

AA QUALITY EGG

1. The egg covers a small area.

2. The yolk is round and upstanding. It is practically free from defects.

3. The albumen is clear and firm. It has a Haugh unit value of 72 or higher when measured at a temperature between 45 degrees and 60 degrees F.

    a. Much thick white surrounds the yolk.

    b. A small amount of thin white is present.

A QUALITY EGG

1. The egg covers a moderate area.

2. The yolk is round and upstanding. It is practically free from defects.

3. The albumen is clear and reasonably firm. It has a Haugh unit value of 60 to 72 when measured at a temperature between 45 degrees and 60 degrees F.

    a. Considerable thick white surrounds the yolk.

    b. A medium amount of thin white is present.

* Adapted from egg chart describing U.S. Standards for Quality of Individual Shell Eggs, U.S.D.A., Agricultural Marketing Service. A summary of these standards is provided in Table 3.

B QUALITY EGG

1. The egg covers a wide area.

2. The yolk is flattened and enlarged. It may show serious defects and clearly visible germ development.

3. The albumen is weak and watery. It has a Haugh unit value lower than 60 when measured at a temperature between 45 degrees and 60 degrees F. Small blood or meat spots (total aggregate area not more than 1/8 inch in diameter) may be present.

   a. A small amount of thick white surrounds the yolk.

   b. Much thin white is present.

LOSS EGG

1. Bloody whites

2. Blood or meat spots aggregating over 1/8 inch in diameter

3. Other inedible egg characteristics

NOTES:

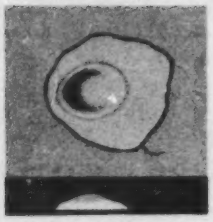
Table 3 - SUMMARY OF SPECIFICATIONS FOR STANDARDS OF INTERIOR QUALITY FOR INDIVIDUAL SHELL EGGS (BROKEN-OUT APPEARANCE)*
(Minimum Requirements and Maximum Defects Permitted)

FACTOR	AA QUALITY[1]	A QUALITY	B QUALITY	LOSS
SURFACE AREA COVERED BY EGG	Egg covers a small area.	Egg covers a moderate area.	Egg covers a wide area.	
YOLK	Round and upstanding. Practically free from defects.	Round and upstanding. Practically free from defects.	Flattened & enlarged. Serious defects and clearly visible germ development.	Inedible egg characteristics.
ALBUMEN	Clear & firm. Haugh unit value of 72 or higher. Much thick white surrounds yolk. Small amount of thin white is present.	Clear & reasonably firm. Haugh unit value of 60 to 72. Considerable thick white surrounds yolk. Medium amount of thin white is present.	Weak and watery. Haugh unit value lower than 60. Small amount of thick white surrounds yolk. Much thin white is present. Small blood or meat spots (total aggregate area not more than 1/8 inch in diameter).	Bloody. Blood or meat spots (total aggregate area over 1/8 inch in diameter). Inedible egg characteristics.

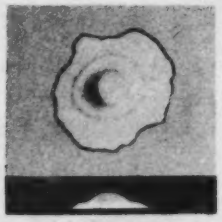
[1] The A quality grade is used to designate both AA and A quality broken-out eggs.

* Adapted from egg chart describing U.S. Standards for Quality of Individual Shell Eggs, U.S.D.A., Agricultural Marketing Service.

CLASSIFICATION OF INTERIOR QUALITY OF BROKEN-OUT EGGS*



1. HIGH "AA"



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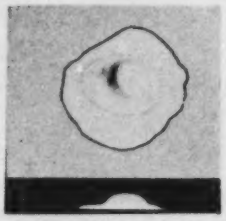
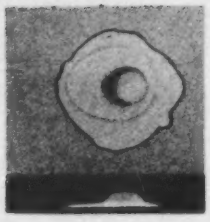
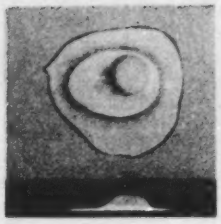


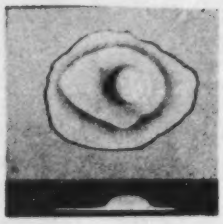
3. LOW "AA"



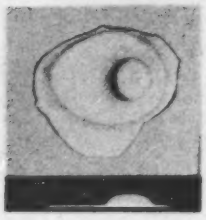
4. HIGH "A"



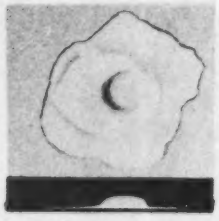
5. AVERAGE "A"



6. LOW "A"



7. HIGH "B"



8. AVERAGE "B'

9. LOW "B"

*The pictures on this chart show the interior quality of eggs that meet the specifications of the U.S. Standards for Quality of Individual Shell Eggs with respect to white and yolk quality. Quality factors dealing with the shell, air cell, and defects are not included.

Scores 1, 2, and 3 represent the appearance of broken-out eggs of high, average, and low "AA" quality; 4, 5, and 6 represent high, average, and low "A" quality; and 7, 8, and 9, high, average, and low "B" quality.

EXERCISE #6 - Grading Individual Shell Eggs for Interior Quality (Broken-Out Appearance)

Indicate the USDA Quality Grade of each egg by placing the letter A (for both AA and A quality eggs), B, or L (for Loss) in the blank space preceding each statement. All other interior quality factors are considered normal.

_____ 1. The yolk is round and upstanding.

_____ 2. The yolk shows serious defects and clearly visible germ development.

_____ 3. A meat spot (3/16 inch in diameter) is present in the albumen.

_____ 4. Only a small amount of thin white is present.

_____ 5. A considerable amount of thick white surrounds the yolk.

_____ 6. The albumen is weak and watery.

_____ 7. The yolk is bloody.

_____ 8. A medium amount of thin white is present.

_____ 9. The albumen is bloody.

_____10. Much thin white is present, but a small amount of thick white surrounds the yolk.

_____11. The yolk and albumen cover a small surface area.

_____12. A blood ring surrounds the germinal disc.

_____13. The germinal disc shows clearly visible germ development and definite blood lines.

_____14. The albumen contains air bubbles.

_____15. The chalazae is very large and prominent.

_____16. The yolk is flattened and enlarged.

_____17. The albumen is clear and firm.

_____18. The albumen contains two meat spots (the size of each spot is equal to the diameter of the lead of a standard pencil).

_____19. Much thick white surrounds the yolk.

_____20. The yolk and albumen cover a wide area, but equal amounts of thick and thin white are present.

GRADING INDIVIDUAL SHELL EGGS FOR EXTERIOR QUALITY

Eggs used in this class are laid horizontally on egg flats by contest officials. The eggs are not to be handled by the contestant.

The contestant should view each egg at the same distance as is used for reading. Only the visible portion of the egg shell is to be evaluated. The contestant should follow a systematic order when evaluating each egg shell for cleanness, shape, and texture.

The contestant is to determine a final grade of either A quality, B quality, or Dirty for each egg based upon the "Standards of Exterior Quality for Individual Shell Eggs." (Note: When grading eggs for exterior quality, only the A quality grade is used to designate both AA and A quality eggs.)

The final grade given an egg is to be based on the factor having the lowest grade. For example, a final grade of B quality would be given an egg meeting the standards for A quality in all factors except one and appraised a B quality in the one factor.

STANDARDS OF EXTERIOR QUALITY FOR INDIVIDUAL SHELL EGGS*

Shell Cleanness

Stains and foreign materials are the two factors considered when evaluating shell cleanness. The contestant should be able to distinguish between stains and foreign materials. A stain can be considered a permanent blemish or discoloration since it cannot be mechanically washed from the shell. (Note: Water spots are not stains.) Foreign materials adhering (sticking, clinging) to the shell may be removed relatively easy and are not considered permanent blemishes. Foreign materials include fecal matter, dirt, dried yolk, blood, and so forth.

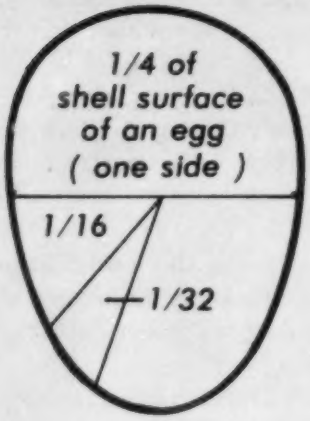
Freedom from stains and foreign materials on the shells of eggs is considered in assigning a quality designation to an individual egg. The following terms are descriptive of shell cleanness:

1. Clean-The shell surface must be free from readily visible stains or discolorations. The shell surface may be considered clean if it contains only very small specks, stains, or cage marks and if they are not of sufficient number or intensity to detract from the generally clean appearance of the egg. Shell surfaces showing traces of processing oil are considered clean unless otherwise soiled. The shell surface must be free of adhering dirt or foreign material. (AA and A Quality)

2. Clean to slightly stained-The shell surface may contain slight stains if they do not appreciably detract from the appearance of the egg. When the stain is localized, 1/32 of the shell surface may be slightly stained. If the stain is scattered, 1/16 of the shell surface may be slightly stained. The shell surface must be free of adhering dirt or foreign material. (B Quality)

* A summary of these standards is provided in Table 4.

3. Dirty-The shell surface may contain prominent stains, moderate stains covering more than 1/32 of the shell surface if localized, or moderate stains covering more than 1/16 of the shell surface if scattered. Adhering dirt or foreign material may be found on the shell surface. (Dirty)



1/32, 1/16, AND 1/4 OF SHELL SURFACE OF AN EGG (ACTUAL SIZE EGG AND APPROXIMATE AREAS)

Contestants may experience difficulty in visualizing the approximate areas illustrated above. Since the total surface area of a normal two-ounce egg is about 10½ square inches, the contestant may wish to remember the following:

1/32 of the shell surface measures a little more than 9/16" x 9/16".
1/16 of the shell surface measures a little less than 13/16" x 13/16".
1/4 of the shell surface measures a little more than 1 9/16" x 1 9/16".

Shell Shape and Texture

The normal egg is oval in shape with one end larger than the other. The large end (air cell end) tapers toward the smaller end. The "ideal" egg shape was developed through research studies based on measurements of both strength and appearance of many eggs. The shape of an egg can vary from the "ideal" shape and still be considered practically normal. Contestants should compare each egg graded to a mental picture of the normal or usual egg shape.

Unusual shaped eggs and those exhibiting definite ridges, rough areas, and thin spots are given lower quality grades since they lack consumer appeal. Abnormal shells usually are a result of improper nutrition, disease, or physical condition of the hen. "Body checks" are eggs whose shells have cracked while still in the body of the hen. They can be identified by an additional deposit of shell over the cracked area resulting in a ridged area.

Specifications of the United States standards provide two degrees of variation in shell shape and texture:

1. Practically normal-The shell is approximately the usual shape. It is of good even texture and strength, and the surface is free of thin spots. Ridges and rough areas are permitted if they do not materially affect the shape, texture, and strength of the shell. (AA and A Quality)

2. Slight abnormal-The shell is somewhat unusual in shape. It is faulty in texture and strength. It may show pronounced ridges or thin spots. (B Quality)

Shell Soundness

The shell of an egg may be sound (unbroken), checked or cracked, or leaking.

All eggs used in this class are considered to have sound shells. Therefore, contestants should immediately notify a contest official if unsound shells are observed.

NOTES:

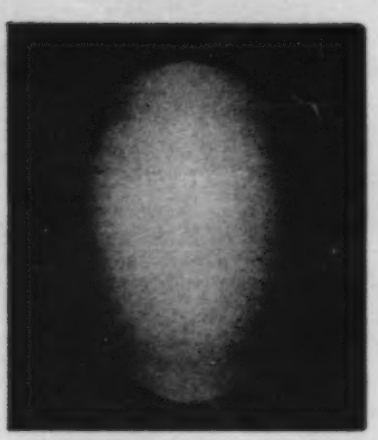
Table 4 - SUMMARY OF SPECIFICATIONS FOR STANDARDS OF EXTERIOR QUALITY FOR INDIVIDUAL SHELL EGGS*
(Minimum Requirements and Maximum Defects Permitted)

FACTOR	AA & A QUALITY[1]	B QUALITY	DIRTY
STAINS	Clean; very small specks, stains, or cage marks not detracting from generally clean appearance; traces of processing oil.	Slight localized stains covering up to 1/32 of shell surface; slight scattered stains covering up to 1/16 of shell surface.	Prominent stains; moderate localized stains covering more than 1/32 of shell surface; Moderate scattered stains covering more than 1/16 of shell surface.
ADHERING DIRT OR FOREIGN MATERIAL	None	None	Adhering dirt or foreign material
SHELL SHAPE	Approximately the usual shape.	Somewhat unusual in shape; round; long; pointed.	
SHELL TEXTURE	Even texture; rough areas not materially affecting the shell shape, texture, & strength; small scattered calcium deposits & pimples.	Faulty in texture or strength; scattered calcium deposits & pimples.	
BODY CHECKS	Ridges not materially affecting shell shape, texture, & strength.	Pronounced ridges; calcified body checks.	
SHELL THICKNESS	Free from thin spots.	Pronounced thin spots.	

[1] The A quality grade is used to designate both AA and A quality shell eggs.

* Adapted from Egg Grading Manual - Agriculture Handbook No. 75.

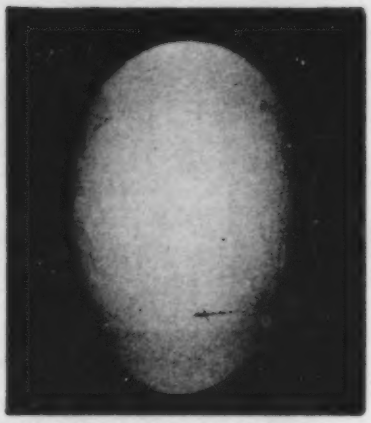
EXAMPLES OF EGG SHELL CONDITIONS
(STAINS AND ADHERING DIRT OR FOREIGN MATERIAL)



Clean; may show small specks or stains not detracting from clean appearance. A Quality.

Slight localized stains covering up to 1/32 of shell surface. B Quality.

Slightly scattered stains covering up to 1/16 of shell surface. B Quality.



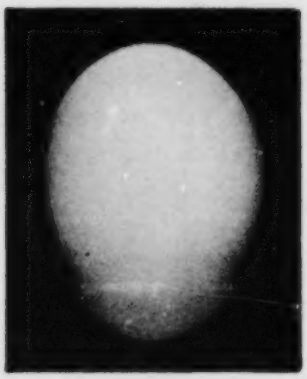
Slightly scattered stains covering up to 1/16 of shell surface. B Quality.

Moderate scattered stains, covering more than 1/16 of shell surface. Dirty.

Prominent stains (regardless of size) and adhering dirt. Dirty.

EXAMPLES OF EGG SHELL CONDITIONS
(SHAPE, TEXTURE, BODY CHECKS, AND THICKNESS)

Practically normal. Slight rough areas. Free from thin spots. Slight ridges. AA or A Quality.



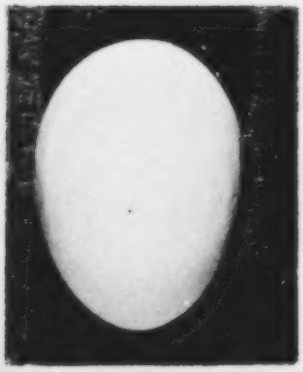
Slightly faulty texture and pimpling. No pronounced rough areas. A Quality.

Slightly abnormal. Shape slightly unusual. Faulty texture. Pronounced ridges. B Quality.

Pronounced shallow ridges. B Quality.

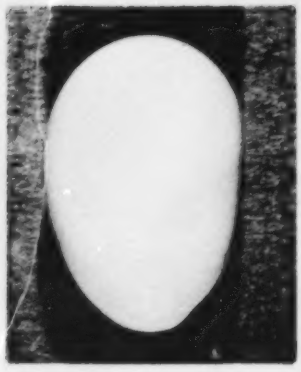
Rough shell and faulty shell texture. B Quality.

Pimply texture and calcium deposits. B Quality.



Faulty shell texture with straight ridging. B Quality.

Rough shell texture with "considerable" pimpling. B Quality.



Poor shell shape and slight ridging. B Quality.

EXERCISE #7 - Grading Individual Shell Eggs for Exterior Quality

Indicate the USDA Quality Grade of each egg by placing the letter A (for both AA and A quality eggs), B, or D (for Dirty) in the blank space preceding each statement. All other exterior quality factors are considered normal.

_____ 1. The shell is pointed.

_____ 2. The shell surface is clean.

_____ 3. Pronounced ridges and body checks cover the shell surface.

_____ 4. The shell is free of thin spots.

_____ 5. Moderate scattered stains cover more than 1/16 of the shell surface.

_____ 6. Sandpaper pimpling covers both ends of the shell surface.

_____ 7. The shell is faulty in texture and strength.

_____ 8. Slight localized stains cover up to 1/32 of the shell surface.

_____ 9. The shell shape is normal.

_____10. The shell surface contains traces of processing oil.

_____11. Rough areas not materially affecting shell shape, texture, and strength cover the shell surface.

_____12. Dried egg yolk covers up to 1/16 of the shell surface.

_____13. Moderate scattered stains cover 3/8 of the shell surface.

_____14. The shell surface is free of adhering dirt or foreign material.

_____15. Pimples are scattered over the shell surface.

_____16. The shell is smooth and even in texture.

_____17. Fecal matter covers 1/32 of the shell surface.

_____18. Slight scattered stains cover up to 1/16 of the shell surface.

_____19. The shell is round and long.

_____20. Small scattered calcium deposits and pimples cover one end of the shell surface.

The following form will be used in placing each of the three classes of live poultry.

Form 2 **Contestant No.**_____

JUDGING CONTEST PLACING CARD

Class No. _____

Class Name _____

Tabulator's Score _____

PLACINGS	CHECK PLACING
1-2-3-4	1
1-2-4-3	2
1-3-2-4	3
1-3-4-2	4
1-4-2-3	5
1-4-3-2	6
2-1-3-4	7
2-1-4-3	8
2-3-1-4	9
2-3-4-1	10
2-4-1-3	11
2-4-3-1	12
3-1-2-4	13
3-1-4-2	14
3-2-1-4	15
3-2-4-1	16
3-4-1-2	17
3-4-2-1	18
4-1-2-3	19
4-1-3-2	20
4-2-1-3	21
4-2-3-1	22
4-3-1-2	23
4-3-2-1	24

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Form 9 Contestant No._____

READY-TO-COOK POULTRY

Grading Card

Class No._____

BIRD NUMBER	QUALITY			SCORE
	A	B	C	
1				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
			Total Score	

A deduction of 2 points will be made for each space that a bird is placed away from the correct quality with a maximum cut of four points per bird. Perfect score is 40 points.

Form 10-A Contestant No._____

EGG GRADING CARD

Individual Shell Eggs-Interior Quality

Class No._____

EGG NUMBER	QUALITY				SCORE
	AA	A	B	Loss	
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
			TOTAL SCORE		

Deduct one point for each space the egg is placed away from the proper quality of edible egg. Deduct three points for crossing the loss line. Deduct a maximum of five points per egg. Interior quality only is to be considered. Perfect score is 100 points.

Form 10-B Contestant No. _____

EGG GRADING CARD

Individual Broken Out Eggs

Class No. _____

EGG NUMBER	QUALITY			SCORE
	A	B	Loss	
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
			TOTAL SCORE	

Deduct one point for each space an egg is placed away from the proper quality of edible egg. Deduct three points for crossing the loss line. Deduct a maximum of four points per egg. Interior quality only is to be considered. Perfect score is 100 points.

Form 10-C Contestant No. _____

EGG GRADING CARD

Individual Shell Eggs-Exterior Quality

Class No. _____

EGG NUMBER	QUALITY			SCORE
	A	B	Dirty	
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
			TOTAL SCORE	

Deduct one point for each space an egg is placed away from the proper perfect quality. Deduct a maximum of three points for crossing the dirty line and deduct a maximum of four points per egg. Perfect score is 100 points.